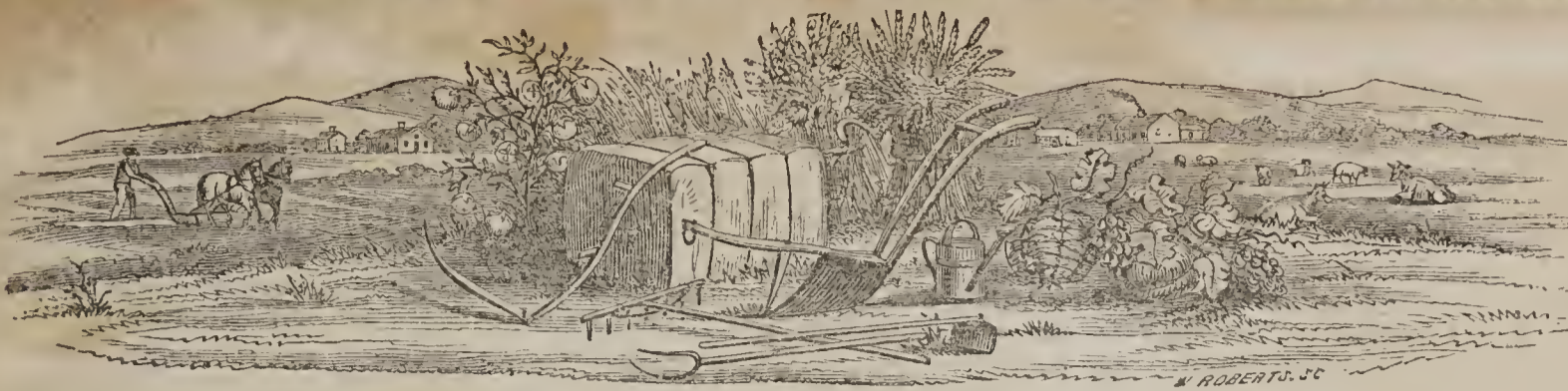


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



FARMER AND PLANTER.

VOL. I.

PENDLETON, S. C., AUGUST, 1856.

No. 6.

The Farmer and Planter

Is published monthly at Pendleton, S. C.,
BY GEO. SEABORN & J. J. GILMAN,
Editors and Proprietors.

TERMS.

1 copy, one year (invariably in advance) \$1
6 copies one year, (directed to one office,) 5
25 copies, " " " " " 20
100 copies, " " " " " 75

All letters, except communications for the Farmer and Planter, must be POST PAID to insure attention.

Advertising and Job work done on reasonable terms.

From the Working Farmer.

Power of the Soil to Retain Manures. [CONCLUDED].

On the motion of Mr. Fisher Hobbs, seconded by Mr. Paine, the best thanks of the meeting were voted to Prof. Way, for his kindness in delivering another lecture before the members, and for the newly discovered and important agencies of the soil, in reference to manure, which he had so ably explained to them on that occasion.

A very interesting discussion then ensued on the manner in which particular well-known facts in the cultivation of land were elucidated by the results thus obtained by Prof. Way in his chemical investigation. Col. Challoner had frequently been at a loss to account for the action produced by clay, or other aluminous matter, on manures applied to a portion of his property on Bagshot-heath, where, as it was well known, the soil was light and sandy, and through which the manure, without such application, passed off, and was lost: he now could understand the reason why, in the course of three years, such soil, from the circumstance of the manuring element being arrested by the clay, became capable of bearing crops. Prof. Way considered the presence of clay necessary to retain manure; not only that immediately applied by the farmer to the land, but that which was known to exist in the atmosphere in the form of soot and ammonia, and to be brought down into the soil by showers of rain. Mr. Raymond Barker referred to

the improvement of chalk lands improved by claying them. Mr. Barclay had found some of the most fertile soils on chalk sub-soils. Prof. Way's specimen of the clay then employed in his experiments was obtained from Dersetsshire; and the more permeable clay was, the more nutriment it would derive from the greater amount of impregnated liquid passing through it. Burning clay nearly destroys the peculiar property to which he had alluded, of arresting manuring matter; but it had been found very advantageous to have a portion of the clay burnt, and to intermix the indurated fragments (or coarse brick-dust, as it might be considered) resulting from such burning, with the remaining raw clay of the land.— Captain Wentworth Buller, R. N., was much interested with the lecture they had just heard. The new agency to which Prof. Way alluded, threw much light on the subject of lining, which, to himself as well as others, had hitherto been a most perplexing one. They all knew that light soils did no good until clay was put upon them, and then they bore excellent crops; that bad meadows were only relieved by draining, for the purpose of allowing the confined water to escape and new supplies to be constantly filtered through the pores of the soil; and that old pasture-ground when broken up, would go on from year to year, without manure, yielding crops equal to those derived from lands to which manure has been regularly applied; and these several effects he thought might be mainly ascribed to the ammonia which, under the new conditions of each case, was retained by the soil. Sir John Johnston conceived that under-drainage was the first essential in water-meadows. He had himself several near Leominster, and for some time it was thought merely necessary to put the water on them for the purpose of producing the effects required. He found, however, that the result was very unsatisfactory, under such conditions; but now, since they had been under-drained, they had become very valuable. He then proceeded to make some remarks on the quality of the water, and its mode of action on water-meadows.

The effect had been ascribed to the warmth of the water, and to its impregnation with manuring elements. He had no doubt that both these causes were favorable to the production of the effects required. About twenty years ago, Dr. William Smith, the well-known geologist, had laid out two catch-meadows for lime in Yorkshire, on the sides of hills of moderate land, of a dry, sandy quality, on the calcareous grit, where the soil was porous, and without clogging. It having been imagined that warmth was the only requisite in the water employed, irrespective of the chalk or calcareous matter held in solution, it was not considered what might be the effect of such mineral impregnation; it proved, however, that the water partook of the nature of the mineral formation, on which the catch-meadows were made; and although earlier crops were obtained than on land not irrigated, the effect of this water was to destroy all the finer grasses, and to leave only the rougher and inferior herbage on the meadows. The irrigation of these meadows had accordingly been discontinued. Mr. Barker made some observations on the common opinion of the mode in which plants derived their nutriment on water meadows. Dr. Calvert would furnish Prof. Way with specimens of soil from two contiguous pieces of land of his own in Yorkshire, one of which bore the heaviest crops for miles round, while the other yielded only the poorest herbage: although the soils in appearance were exactly similar. Mr. Barker thought it essential to ascertain whether the manure was applied in equal quantities to these soils. Prof. Way cited a corroborative instance of the latent causes of fertility and sterility in soils of apparently the same character. Two soils were sent to him from Sussex, with a request that he would submit them to scientific examination, and report the difference between their qualities. He found them in appearance exactly alike, their mechanical characters being identical in every respect; and chemically analyzed, they were found to contain similar proportions of clay, sand, chalk, and organic matter. He reported this result accordingly, when the

gentlemen who had sent the specimens to him informed him that one of the soils was one of the best in the county, yielding five quarters of wheat; while the other was one of the worst, yielding only two quarters; on which Prof. Way recommended him to try liming on the poorer soil. Colonel Challoner inquired whether acidity in the land might not often exercise a great influence over the quality of the soil and crops? and whether chalk would not remove such acidity as readily as lime? Prof. Way replied that caustic lime had an effect which chalk had not. Col. Challoner observed that quick-lime, on exposure to the atmosphere, soon became converted into the carbonate of lime, or chalk; but he was not aware whether the same conversion would take place when lime was mixed with the soil. Prof. Way remarked that lime, when only imperfectly excluded from the atmosphere, retained its causticity for a great length of time; for instance, in the mortar of buildings erected 500 years ago, the lime was found to have remained in its simple state, without having combined with the carbonic acid of the atmosphere. Mr. Bigby Wason then made some observations on the bearing of these new principles on the questions of deep or shallow drainage. He conceived that we ought to drain as shallow as we could do, so as to drain effectually, in order to keep the arrested manuring matter more nearly to the crop growing on the surface, and thus render the whole available for the purposes of vegetation. Mr. Baker referred to Sir H. Davy's advice to cart out all manure, and mix it with the soil the day it was made. Mr. Fisher Hobbs had never heard a lecture on chemistry of more importance to the practical farmer than the one with which Prof. Way had just favored them; nor one from which the practical farmer would eventually derive more essential advantage. By the agency pointed out to them, not only color and smell were removed from manuring matter, but that all-important volatile substance ammonia was fixed and arrested in its passage through the soil, and retained in such combination until required as pabulum for the growing plant. He could not agree with Mr. Wason in reference to shallow draining, when it was known that a depth of 30 inches gave off thick and turbid drainage water, while a procolation four feet deep had the effect of entirely removing the manuring matter, and allowing the water to pass away clear and limpid.

Mr. Hobbs then gave an interesting statement of the depth to which he had known roots, especially those of wheat, to penetrate, for the purpose of deriving nourishment to the plant; and of the result of his own experience in applying chalk or lime to the clays of Essex, which were almost unprofitable until the application had been made. He conceived that irrigation had not its proper effect, unless the lands to which it was applied were underdrained; and alluded to Mr. Parke's recommendation of sub-irrigation, or the carrying of water by sluices and drains to the roots of the plant, and al-

lowing it to remain below the surface a sufficient time to enable "mother earth" to abstract the warmth and nourishment required for the plants. He hoped, now, that chemistry, by its immediate application to practical purposes, would become an important aid to agricultural improvement. Mr. Wason, in justification of the opinion he had offered respecting shallow draining, would remark, that the better the soil the shorter the root, for it would not be required to proceed far in search of its food; and the worse the soil, the longer the root, which in this case would exhaust the plant of its energies by creating the means for its radical extension, for the purpose of acquiring nutriment from the barren soil. Mr. Paine stated the result of his experience on the application of clay to sandy land, and the abiding effects of high manuring. For several years he had known 50 or 60 tons of gault clay per acre applied to sandy soils, of which the effect was evident 25 years after the application; and was not due, as we found from Prof. Way's lecture that day, to the merely mechanical action of the soil, but to its chemical agency in arresting ammonia. Hops, it was well known, required rich manuring, and a piece of Hop-ground having been grubbed up, and the ground cultivated for farming purposes, the exact line of demarcation between the manured and unmanured portions of the farm was most striking.—In fact, Mr. Paine observed, manure was never lost, for the soil was a magazine for its safe retention. Prof. Way remarked that the power of clay to retain ammonia was astonishing. He had a piece of plastic clay given him by Mr. Paine, dug up in its hard dry state, from a depth of 25 feet below the surface, in the very centre of which, when broken up, he detected a very sensible quantity, namely one-tenth per cent., of that volatile alkali, obtained by the clay from some animal source at a very remote period in the geological history of the world.—Mr. John Bethell inquired of Prof. Way, whether an arable field, from the principles deduced from his researches, and laid down in the lecture just delivered, might be regarded as a reservoir for manuring matter; he thought that clay fallows in summer might be frequently watered with ammoniacal liquids without injury to the subsequent crop.—Prof. Way considered that they might be so watered, provided sufficient time was allowed for the ammonia to become combined with decomposing salt contained in the clay, and thus have its caustic action prevented.—Mr. Bethell further enquired, whether Prof. Way would advise liming previously to the application of ammonia?—Prof. Way would, in all cases, recommend the use of lime first, and then the application of manures; the lime and manure not to be mixed together, but to be applied separately. Mr. Bethell remarked that, as arable fallows, after being plowed up, were frequently left in a plastic state, it would perhaps become a question whether scarifying them several times during the year would not render them better filters for the liquid manure applied to them; and if so, what

would Prof. Way consider the proper depth for such filtration.—Prof. Way felt a difficulty in answering any inquiry that would lead him to give an opinion on the contested question of deep and shallow draining. Mr. Bethell was aware that guano was applied to the growing crop in dry weather; but he thought it would be well to mix guano up with the soil.—Mr. Brandreth Gibbs thought much would depend upon the point, whether the application was made to the immediate crop, or otherwise.—Prof. Way considered that it might be applied in any weather, provided it were well mixed with the soil.—Col. Challoner applied tank water to his fallows. He had that morning ordered that two carts should convey the contents of three tanks on his Turnip land; and that the liquid should be turned in with the soil. He had found manure water applied to Grass land in dry weather burnt up the Grass, while the same application after a shower always did much good. Mr. Barelay stated his experience to the same effect; but having named the circumstance to Col. Le Couteur, that distinguished cultivator had informed him, that in Jersey he had carried liquid manuring to a great extent; but he had made it a rule never to apply it in dry weather. Mr. Fisher Hobbs had been frequently told by the late Lord Western that he would not succeed with liquid manure; but he had nevertheless persevered, and had been successful whenever he had applied it to grass in wet weather, but not otherwise. He inquired of Prof. Way, whether, in the case of gravels and sands, where there was no clay conveniently at hand, charcoal or charred peat would not retain the ammonia, and might be applied as a substitute. He had largely, and with great effect employed, the fish-salt of pilchard-curers, as a manure. He had found, that when guano was sown in the field, and this fish salt sown over it, that the salt had the property of depriving the guano of nearly the whole of its smell; and as the salt in question had 10 per cent. of oil, he thought it probable that this oil might have the power of fixing the volatile alkali.—Prof. Way replied that charcoal or charred peat had certainly the power of absorbing a considerable quantity of ammonia, and would no doubt have a similar effect to that of clay in retaining that substance, although its mode of action would be quite different. He also thought it very possible that an empyreumatic oil, like that to which Mr. Fisher Hobbs had alluded, would have a strong tendency to remove the causticity of the ammonia, by forming a spontaneous compound with it.

AGRICULTURAL PAPERS.—The American Agriculturist says that of the 20 million inhabitants of this country, more than three-fourths of whom are engaged in agricultural and horticultural pursuits, and most of whom obtain their entire support from these avocations, *not one in two thousand*, and we much doubt if there is *one in three thousand*, who subscribe for and read a purely agricultural paper!

From the Albany Cultivator.

Neglected Manures---Bones.

Analytical Laboratory, Yale College, }
New-Haven, Conn., Feb. 7, 1850. }

MESSRS. EDITORS—Having now called attention to some of the leading differences in the constitution of manures, and to the substances which are most valuable in them, I shall proceed to mention particular instances in the various classes named.

The extent to which fertilizers of every description are wasted in this country, is exceedingly great; if the value of all that is thus lost in one year could in any way be ascertained, even over a comparatively small district, the aggregate amount would be quite astonishing. Many farmers do not save much more than half of their barn-yard manure, permitting all the urine and the drainings to be washed away by rains; of those who do not endeavor to preserve their yard manure in the best possible state, there are many who neglect means of fertilizing their soils that are far more powerful. We often see those who buy guano, poudrette, &c., at high prices, and yet pass by quite as valuable manures that they might obtain for little or nothing.

I propose to specify and describe some of these neglected manures, and to explain some of the properties which establish their value.

One of the most common of all, and one that has till lately been almost entirely thrown away among us, is found in bones. Though this manure is gradually coming into use, in most districts its excellence is still almost unknown, and incalculably the greater part of our bones are either thrown away, used for manufacturing purposes, or exported to enrich the soil of Great Britain.

In urging the importance of bones as a manure, I shall first give some details relative to their component parts. The bones of animals, birds, and fishes, when dry, do not differ greatly in their composition, although their appearance is so different. Bones of animals, in their fresh state, contain from five to thirty per cent. of water mingled with a little fat; those of fishes contain from 70 to 80 per cent. of water. When dry, the proportion of earthy matter in each is about the same. This dry bone is not, however, by any means all earthy matter; about one-third of it is an organic substance called cartilage or gelatine. It is soluble in water, and may be for the greater part, extracted by boiling, forming common glue; this useful cement, the cartilage of bones, is an extremely nutritious and concentrated food. When obtained from clean bones, the solution evaporated, and seasoned so as to be palatable, little cakes may be made which will keep unchanged for a long time; small portions of these will retain the strength of the body in a degree corresponding to that derived from a full meal of ordinary food. When a strong heat is applied, this organic matter disappears, and the bone is left perfectly white, but not reduced in size. If a little muriatic acid be mingled with water, and a bone placed in it for a few days, the earthy

matter will be dissolved out, the bones being again left of full size, but now perfectly flexible, so that it may be bent like a piece of rope. In this way, we can prove that the cartilage is distributed through the whole bone. If it were all earthy matter, then it would be brittle and liable to snap by a sudden spring or blow; the cartilage, however imparts so much elasticity that, unless in cases of great violence, bones ordinarily resist uninjured the shocks to which they are exposed.

This cartilage owes its remarkably nutritious properties to the large quantity of nitrogen which it contains. The sixty or seventy per cent. of earthy or mineral matter which remains after the separation of the cartilage, is composed chiefly of phosphoric acid, as mentioned in my last letter, phosphate of lime. Besides this, there are small quantities of carbonate of lime, (lime and carbonic acid,) carbonate of magnesia, &c. Thus, then, in 100 pounds of dry bones, there are about 35 pounds of cartilage, 50 to 55 of phosphate of lime, and 10 to 15 of carbonates of lime and magnesia.

When it is considered that the cartilage is rich in nitrogen, and the phosphate of lime in phosphoric acid, we see at once from what has been said as to the value of manures in a preceding letter, that bones must be remarkably fertilizing; in them we have the very requisites that were mentioned as the principal ones in all very powerful manures.

Some writers have attempted to show that the beneficial action of bones was due to the cartilage; others that it should be ascribed to the phosphates alone. I think that both are wrong, for the reason that each part contains substances in which most soils are deficient, and hence both are likely in a majority of cases, to prove advantageous additions. One would suppose that as the cartilage is soluble, it would soon disappear, but this is not by any means the fact, for it seems to dissolve out very slowly under the earth's surface. Berzelius tells of a soil in Sweden which had long been celebrated for its capacity of bearing grain.—There seemed to be no reason why it should be so superior to other soils, but a close examination with a glass discovered fine fragments of bone, and it was then remembered that this had been, according to tradition, an ancient battle field; the bones of the fallen warriors still continue to enrich its soil. When a quantity of these fragments of bones were collected and boiled, a thin jelly was obtained by dissolving out small portions of cartilage which thus remained in part, even after the lapse of so long a time.—Both portions then, probably, continue to furnish food for the plant, until the bone finally crumbles quite away. The first effect is doubtless owing in a great degree to the cartilage, as that is most soluble.

Having thus settled the question as to the value of bones, we proceed to consider the various modes of applying them to the soil, with reference to their effect upon crops. The old plan was to plow in the bones whole; applied in this way,

their action was not so immediate as lasting: the whole bone decomposes very slowly in the soil, and may be taken up after lying buried many years, scarcely changed as to its external form; it will be found, however, if it has lain near the surface, that the color has altered, that it has become light, honey-combed and brittle. A chemical examination will show that it has been slowly dissolving, and yielding its various constituents to supply the wants of plants. The roots of any plant which can reach such a bone, will twine around it, insert themselves into its cavities, and show in every way, how eager they are for the food which it affords them. The decomposition of whole bones being so gradual, and it being difficult to distribute them equally so that all of the plants might feel the influence, it was necessary to apply large quantities; from 70 to 100 bushels accordingly was not an uncommon dressing for an acre.

At this rate, all of the bones available to the farmer, would not go far toward manuring his land, and it became desirable to devise some more economical method of application. This was found in crushed or ground bones. They are now in Great Britain used in various stages of fineness; inch, half inch, and dust, are three of the more common descriptions. Bone dust is the most active and the most speedy in its effects, so that a smaller quantity than that of the other kinds will produce an equal benefit to the crop.—Being so fine it decomposes more readily, and therefore is not as lasting. There is, nevertheless, better economy in its use, for it lasts a long time, even in a minute state of division; 8 or 10 bushels doing more good than 70 or 80 bushels of whole bones. Being powdered the dust can be sown evenly over the surface, either by hand or machine, or can be deposited in drills. A small quantity thus put on at short intervals, keeps the land constantly well supplied with as little waste as possible; it is also, by this system, always retained near the surface, and within the reach of roots.

If the dust or crushed bones be heaped up ten days or a fortnight before required for use, and covered with earth, a heating and fermentation takes place which prepares for a more speedy decomposition, and consequent fertilizing action in the soil. It is also found a very good practice to mix with fermenting yard manure when it is intended to apply bone dust broadcast and plow it in.

From the mention which has been made of nitrogen and of phosphates in the grain of our crops, it might be inferred that this manure is especially adapted to the increase of that part, and experience in England has amply proved this to be the fact.

There are now several mills where bones are ground in the neighborhood of Meriden and Middletown, Ct. I have been informed during the past season, that ten bushels of bone dust from these mills, per acre, brings up much of the worn-out land in that vicinity at once, enabling it to bear as much Indian corn as when it was first broken up from the virgin forest.

I have no reason to doubt this report, as it only agrees with the results obtained in numberless cases abroad.

There is yet another and most important method of applying bones, a notice of which must be deferred till my next communication.

JOHN P. NORTON.

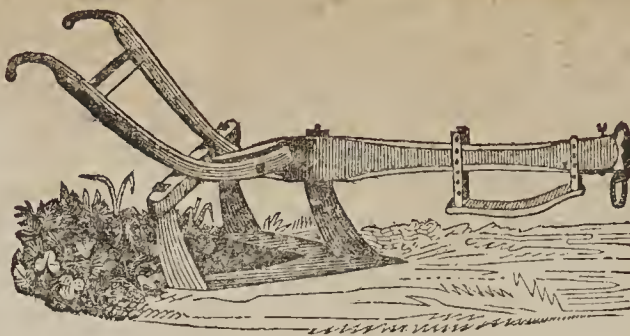
The Cotton Louse.

To the Editors of the Tenn. State Agriculturist:

GENTLEMEN—In the February No. 1842 of your periodical I observe a letter from "Your Patron," who hails from Shelby Co., Tennessee, in which he states that "the louse" was very destructive to Cotton in that region, last spring:—"nearly every planter," to use his language, "lost their stand of cotton by them." He adds, "Any information respecting their origin will be thankfully received."

Now I claim not to be one of your experienced correspondents, of whom alone "Your Patron" asks information; but I will, nevertheless, venture to predict that a knowledge of the origin of "the louse" will not be had in our day and generation. However ungrateful such a prediction may be to our curiosity to learn whether the "red ant" or the "lady bug" or some other bug deposits the egg from which the troublesome insects spring, I think it of far more importance to the planter to know by what means he can defend the cotton plant from its destructive propensities. Under this impression I will state some facts which have come under my observation, or otherwise to my knowledge; and the plan which those facts seem to me to suggest for guarding against its ravages.

The time when I first saw the cotton louse was in the spring of 1837. I cultivated the best quality of upland in the country. The growth on it before it was cleared was most hickory trees: it was fresh, and consequently light and mellow, and in the most favorable condition to ensure a good "stand," to use a technicality of the planters. (For be it known and remembered, that however bitter and inextinguishable the prejudice which many of this class in society cherish against some others, but especially the lawyers, one acquainted with the routine of business on a plantation, knows that planters are, like lawyers, compelled *ex necessitate rei* to use technicalities too.) When my cotton came up it presented as fine a stand as I ever saw. The grass and weeds came up; not "few and far between," with it. It continued to flourish till "seraping time" (to use another technicality,) viz: about the last of April, when the hoe is used in seraping away the grass and weeds and surplus plants, so as to leave those plants which are selected and left to grow, clean and at the proper distance from each other. A few days after I commenced the seraping I discovered that the cotton plants, which had been cleaned by this process, were wilting and dying to such a degree as to render it necessary to plow them up and re-plant, although I had pursued my usual plan of leaving two or three plants in each place or hill to insure a sufficient stand. Having never seen the cotton louse, nor witnessed its



[PARING PLOW]

the hands follow with sharp spades and cut it into suitable lengths, say of two or three feet. These pieces are then thrown into heaps, and after drying, they are burned, and the ashes spread broad-cast on the lands. Pairing and burning is a very ameliorating process for stiff, clayey soils; it changes the mechanical texture, and renders them friable and suitable for cultivation. Light sandy soils should not be burnt.—A. B. Allen & Co.'s Catalogue.

Paring Plow.

THE annexed cut represents a plow used for paring turf-lands preparatory to burning. The share is thin and flat, made of wrought iron, steel-edged. It has a lock-coulter in the centre, and short coulter on the outside edge of each wing of the share, cutting the turf as it moves along into two strips about one foot wide, and as deep as may be required.

After the turfs are paired off in strips,

ravages, I was wholly at a loss to account for so strange a circumstance as was then presented to my view:—the cotton which had been cleaned was nearly all dying, while that which had not been scraped appeared to be green and flourishing. A gentleman who had witnessed the ravages of these insects a year or two previously in Alabama, directed my attention to them on my cotton. I could, after this, very easily account for the wilting and dying condition of that which had been scraped. I had laid off my cotton rows four-and-a-half feet apart—the usual distance—and ploughed out the middles so as to convert the entire surface of the field into beds or ridges, upon which the seed were sown. The hoe was preceded by the plough which was run on each side of the row of cotton with the bar next to the cotton in order to lessen the labor of scraping with the hoe. By which operation all the weeds and grass in the middle of the row were covered up. The hoe followed cleaning out the row and leaving the plants from one to three in number at the intervals of from eighteen to twenty-four inches, so that not a particle of vegetable matter was left upon the ground save the cotton plants thus selected. The insects were upon the surface of the earth, and having no other vegetable matter upon which to support their ephemeral existence, they collected in crowds on the nether sides of the leaves of the plants and very soon sucked all the juice out of them, causing them to appear dry and parched as if blasted by the application of fire. At the same time the process of scraping had necessarily taken some of the earth from about the roots of the plants and left the tender stems exposed to the heat of the sun, and the cold of the nights. What wonder, then, that such tender plants should die as they did?

On the contrary where the grass and weeds were not destroyed these protected the cotton in a great measure, from the destructive powers of the insects by affording them the means of subsistence—Upon examining the fields of others I found that those who were "in the grass" had no difficulty in securing good stands of cotton. My subsequent observations, especially those which I have made last spring when the insects destroyed many crops in this country, have confirmed me in this opinion which I formed in 1837,

that vegetable matter in the form of grass and weeds must be left in the field for the insects to subsist upon as a protection to the cotton until they disappear, which they usually do early in the month of June.

But how is this to be done without endangering the crop by getting "in the grass," as the planters say? I answer, very easily. Instead of plowing up the ground entirely into ridges, make the ridges with about four furrows, leaving balks between them untouched by the plow until all danger from the louse shall have ceased. Keep the cotton row clean of weeds and grass, in the meantime, and cut up as small a number as possible of the plants. After the louse disappears plow up the balks, and thin the cotton as desired; and I think there will be, generally, as good a stand as the planter may want. I was informed last summer by a gentleman who has been planting cotton in this State for more than thirty years, that this was the plan that was adopted successfully, by the planters upwards of twenty years ago against the snails or grasshoppers (I do not recollect which,) which were then as destructive to the cotton plant as is the louse of the present day, if not more so.

Should this plan fail in securing a stand of cotton, another consequence highly beneficial to the planter must result from it:—it will prevent his land from washing so much as it otherwise would. To prevent his land from washing is a matter that should receive the most studious attention of every one who plants cotton on upland.

Respectfully yours,

LEWIS M. GARRETT.

Interesting to Cotton Growers.

THE subjoined communication from an esteemed friend and occasional correspondent, will commend itself to our agricultural readers. They are, of course, better judges than we are, of the value of the suggestions made by "D." To us they appear plausible.—*Memphis Enquirer*.

PANOLA CY. (MISS.) JAN. 26,

MR. EDITOR—It is usual for Cotton growers to sun their Cotton as they gather it, and then gin it as early as possible. This, according to my judgement and experience, is clearly wrong. Cotton should never be sunned, unless it be such as has been gathered quite wet with rain;

nor should it be ginned until it has been heated.

Heat diffuses oil, and we know there is a large quantity in cotton seed. Now, sir, put it together as you gather it, both morning and evening, and there is sufficient moisture to make it heat. This being the case, the oil in the seed is diffused throughout the lint—for it cannot evaporate. When it remains in this situation a sufficient length of time to spoil the seed, the cotton should be then thrown up and cooled. Care should be taken not to let it turn blue:—this, however, is not so easily done as you might suppose.

The process of turning over and throwing up will likely have to be repeated two or three times before the seed are entirely spoiled. The trouble of overturning and tossing it up in the cotton or gin house, is not greater than sunning it on a scaffold. By this process you gain the weight of the oil which is diffused throughout the lint, which gives the cotton the oily gold color which is desirable, and also that elasticity and adhesive quality, like wool, which never fails to enhance its value.

But, sir, there are other advantages growing out of this operation: the gin will pick at least one-sixth faster, and clean the seed much cleaner when the cotton has thus been compressed together; and instead of cutting off short particles, as is always the case when the cotton is open and fresh, the saws take it off in large flakes, thereby making the staple longer and stronger.

Every farmer knows that his early cotton outweighs, and has a better staple than his late cotton; and he also knows that the earlier it is gathered after it opens the better. Now, sir, these facts show the correctness of my theory; for exposure to the sun and rains evaporates the oil from the seed and makes the lint short and light.

Farmers should secure in dry weather and from evening pickings, in a house to itself, or a portion of the gin, sufficient of dry, good cotton, to make seed, but the balance of their crop they should be sure to subject to the process of heating and cooling in the shade. It is said that the British East India cotton is vastly inferior to ours at present. If we can make our cotton still better, the danger from that quarter will be lessened.

Essays on various Subjects of Practical Farming.

BY EDMUND RUFFIN, OF VA.

No. 1.—ON DRAINING.

Observations on the General Subject.

THE draining of superfluous and hurtful water from arable land, is one of the most general and important requisites of agriculture. Yet no other operation of general utility and importance in farming is so little understood, or so generally neglected. The dryness of our climate, and the general sandy and pervious texture of our soils and sub-soils, (permitting the natural discharge of surplus water by filtration,) leave much less necessity for draining in this region than exists in

countries like Britain, having a moister climate, less influence of the sun, and also in general more clayey soils and subsoils, too close in texture to permit the descent and escape of surface water by filtration. Still, comparatively exempt as may be our lands from the necessity for drainage in general, much of the small proportion for which it is required, and for which the execution would be highly profitable to the farmer, is still left without any efficient attempt for relief, or the attempted drainage has been so erroneous in plan, or imperfect in performance, that the labor has been of very little benefit—and in many cases the cause of actual difficulty, and of much increased cost to subsequent and better directed operations.—Small as is the proportion of lower lands of Virginia which require artificial draining, there are but few farms on which there is not more or less of even the cultivated (and supposed dry) land injured by superfluous water; and which injurious water can be removed not only beneficially, but profitably in every sense.

If rain water remains in standing pools in depressions of the surface of land, or any soil too close in texture to permit the escape of water by filtration, and with a surface too level for the excess to flow off—or if springs, or streams, flow over the surface of any ground—all persons would deem it necessary to remove the water by drainage. And for such ends, it would often be deemed sufficient merely to draw off the excess of water by open ditches leading to some lower place of discharge. Even these ditches are usually rude in construction, imperfectly placed, and therefore costly to maintain, and of bad operation withal. But no regard is usually paid to the numerous other cases of subterranean or under-water injuring the surface-soil and its productions, tho' not actually oozing out at any time on the surface, in visible fluid; and the farmer is content to till such ground to obtain less than half the proper and available products. Indeed, the best artificial drainage in this country, in numerous cases, falls far short of attaining the perfect end sought for or which is desirable. This must often be the case, not only because of the occasional deficiency of knowledge, and of errors of judgement and of the plans of even judicious drainers—but also because our low priced lands and their products will not, by the increased profits, always remunerate the costs of the most perfect and effectual drainage. But tho' it is not always possible, and, if possible, might not be profitable or desirable, to drain all wet lands in the most perfect manner, it is essential to the best profit, on almost every farm, that much more draining shall be executed—and also that the modes adopted shall be both cheaper and more effectual than those most usually employed, or recommended.

In one of the latest European treatise on this subject, republished in this country, (embraced in the "Book of the Farm,") draining is defined as the "art of rendering land not only so free of moisture as that no superfluous water shall remain in it, but that no water shall remain

in it so long as to injure or even retard the healthy growth of plants required for the use of man and beast." Now this is a correct definition of *perfect* drainage.—But such a degree of perfection, if to be attained by art, and by the outlay of labor and money, would be too costly in many situations, and for almost all in Virginia. In the work just quoted from, cases are stated of different profitable drainages having been executed at prices rising above £5 the Scottish acre, (equal to \$20 or more for the English and American acre;) and the author supposes that £7 the acre might be well afforded. It requires no argument to show that no such expensive drainage would be justified by the profits on our cheap lands, and in ordinary cases; and that it would be preferable here to adopt cheaper and less perfect modes—or, in some of the most difficult cases, to omit the drainage, and lose the use of the land altogether.*

The want of sufficient draining not only increases the labors, and lessens the products, of more or less land on every farm, but the healthiness of such localities is necessarily impaired. The excess of water, whether lying on the surface of the land, or reaching it from below by capillary attraction, in either case is stagnant, and hurtful to the plants which are rooted in such ground, and to the residents who breathe the air contaminated by the exhalations from the evaporating excess of water. The draining of a country conduces to its healthfulness more than any other means; and the benefits on this score would usually remunerate the proper costs and judiciously directed labors of drainage even if there were no other profits.

There is still another important benefit following draining, in the improvement of the temperature and warmth of the soils. It is a well known scientific fact that evaporation produces cold. The

*In the last No. (for June 1850,) of the "American Agriculturist" of New York, there is an editorial article on under-draining, in which are the following passages:—"The expense of thorough under-draining in England, a few years since, was from £7 to £10, and even £12 the acre; but owing to recent improvements and facilities in the mode of doing it, and procuring materials, the cost is reduced to about £4 or £5, (\$20 to \$25), a point beyond which it would seem scarcely to admit of being lessened," &c. The writer thereupon estimates that in this country, the increased costs "need not add more than 20 to 30 per cent. to the English prices.—This may make the cost of draining, from \$25 to \$35 per acre—possibly, in some instances, \$40. If the result should prove that we can double the crop on such fields, there are millions of acres of land in this country that will this moment justify the adoption of a system of thorough draining, &c."—I dissent entirely from this recommendation. The writer is referring to the English plan of thorough draining of surface water only, (not springs,) and by the costly English appliances of tiles, pipes, &c. To justify and remunerate such expenses as would thereby be incurred, there should not only be greater necessity for the improvement than the soils and climate of this country often present, and higher prices of land and its products than even those of New York, but the further condition that the costly improvement shall be both effectual and permanent.

wetter any ground is, the greater is the evaporation therefrom, and consequently the colder the soil, and the atmosphere immediately overlying the soil. Every farmer knows that on damp spots of his fields, seeds cannot be planted except at great hazard, until late in spring. The injurious effects of cold, or low temperature, are manifest until near mid-summer, or even later, if the excess of subterraneous moisture remains so long. The seeds of crops are there slow in germinating, if they do not actually rot. The plants rise feebly, grow slowly, and are easily and greatly injured, and many destroyed because of their unhealthy growth, by depredating insects. However rich may be such land, and though no excess of surface-water shall be ever visible, and the under water may be only perceptible in its noxious effects, still not more than half products will be reaped, for more than a double expense of labor.

The production of cold by the evaporation of excessive moisture is still more obvious in the greater thickness of ice, and more destructive effects of killing frosts, on low lands than on the adjacent high and dry hills of table lands. Such facts are familiar to every farmer who owns land of both kinds. When the temperature is lowered in cold nights of spring, so as barely to permit the commencement of freezing on the high land, the ice will be from an eighth to a quarter of an inch thick on the close adjacent and apparently dry low ground. Late spring frosts also, and for the same reason, are more injurious to the crops of low than of high lands adjacent. The greater degree of cold thus produced of course is in and immediately over the wettest spots, evaporating the most water. But by the motion and intermingling of the atmosphere, the temperature is somewhat equalized over all the contiguous low land; and thereby the parts most perfectly drained are injured by the cold produced by evaporation from the wettest. And thus the want of draining on one farm may serve to lower the temperature and injure the climate, as well as to effect the healthfulness, of the adjacent farms.

To treat thoroughly the extensive subject of draining in all its branches, the principles, and the practice, would fill a volume. It is far from my intention to attempt such a task. Sundry extensive treatises on this subject have already been published by European authors; and defective as they all are, as guides for instruction in practice, and for the different condition of our country especially, they may be read with much advantage by all who desire to study thoroughly the theory or the principles of draining. But whether it is because of the difference of existing circumstances of different lands—or because the scientific authors were deficient in knowledge and experience of practical operations, I have met with no such treatise that would guide a learner to the desired end of successful practice. And thus it happens, that though the theory, or scientific principles of draining, (and especially of under-draining,) may be correctly learned from any one of sun-

dry elaborate treatise, none of their authors have succeeded in applying the theoretical principles to safe practice.—From my own long experience, and especially from my many errors and consequent failures, I have learned that the instructions of these authors for laying covered drains can never lead to successful results, in this region at least, without the appliance of precautions and safe-guards which they have not mentioned as being requisite. If a young farmer were to begin and prosecute the laying of covered drains, with all the aid the directions furnished by the works of Thaer, Johnston, Stephens, and other European authors of the highest authority, his expenses would be twice as great as would be sufficient for successful results, and yet success would be rarely attained. Indeed, such instructions faithfully but blindly obeyed, would be more sure to lead to loss and failure, than would the absence of all such instructions to a thinking and judicious learner, who would study by experiment, and establish truths by his early failures, and the investigation of their causes.

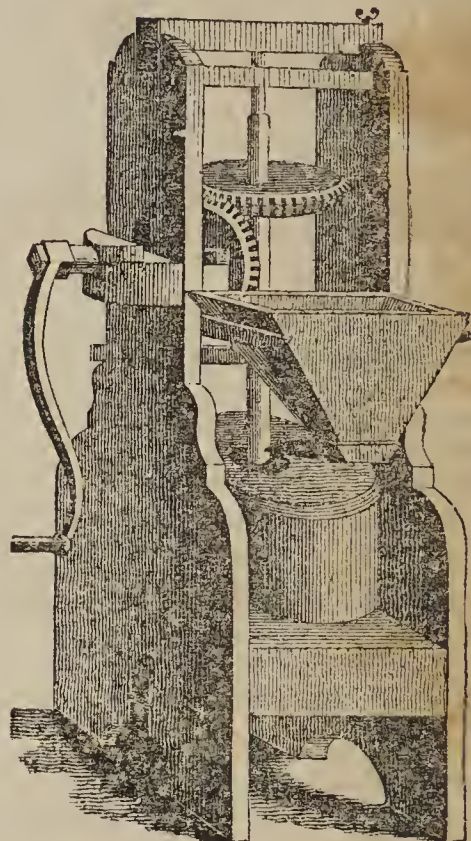
My proposed task is much more humble than to write a complete treatise on draining. But yet it may be more useful than works of much greater pretensions and higher authority, to the farmers of this country; and especially to those of the tide-water region, to which my draining labors and experience have been confined. For though the principles of draining are uniform and invariable, yet the circumstances causing the want of draining vary greatly with the differences of geological formation of different localities; and the features of the tide water region, in regard to geological formation, character and dip of the strata, &c., are very different from those of the parts of Europe which have furnished most of the examples, and subjects for application, to European authors and scientific drainers.

The superfluous and therefore hurtful water, from which land requires to be relieved by draining operations, is the whole excess beyond the quantity of moisture needed for the most healthy growth of the crops. It is either *surface-water*—supplied to the surface of the field immediately from the clouds, in rain, (or snow,)—or remotely from rains or springs, flowing from higher and perhaps remote lands, and which pass over in streams, sometimes swollen and overflowing for short times; or it is subterraneous, or *under-water*, proceeding from springs, and reaching first the lower earth, and subsequently the surface, by capillary attraction of the earth only, if the water be in small quantity, or in cozes—or springs bursting out, in large quantity. The remedy for the evil of surface water, (for this country at least,) will always be best provided in *surface or open drains*, including the extremes of ordinary ploughed water-furrows and the largest stream-ditches. Under-water will generally be best removed by *covered drains*. But exceptions to both these general rules will be found in practice, according to variations of the circumstances of the supply of water, the

texture of the soil, and the shape of its surface. The whole subject then will be treated in the two divisions, of injury from *surface-water*, and that from *under-water*, and the respective remedies for both.

[To be continued.]

Bur-Stone Mill.



EVERY day it is becoming more and more the practice to feed stock upon meal rather than corn. Close observers have long since been satisfied that it is true economy, because it is not only a great saving in quantity of food, but the animals may be kept in better health and condition. It is somewhat more troublesome, but the extra labor is most amply repaid. To all who have water power at their command, it is the true policy to set up mills for plantation use; to those who have not, the Bur-stone Mill is a substitute that planters should hail with welcome.

It is adapted to grinding all kinds of grain, and was more particularly designed for the large plantations of the South, where mills propelled by water are not often to be met with. By the Bur-stone Mill, from two and a half to five bushels may be ground per hour.—Eds.

What Cows should Farmers Keep?

WHAT are the qualities necessary to constitute a good cow? A good milker alone does not, in our judgment, make a good cow; neither does a good breeder, nor a good feeder. It is these three qualities combined that make the cow. Give us a cow that is good for milk—quality as well as quantity considered—that when properly bred to good bulls will invariably produce good calves, and one that, when dried of her milk, will, with proper care and attention, take on flesh,

rapidly and even—and, for one, we rest, for a while at least, satisfied. And till we can raise up an entire herd of cows, each one of which shall possess these excellencies, our aim shall be to advance in improvement till we can accomplish our object.

To possess the first of these qualities, a cow should have a fine head, a little wide above the eyes, but quite small below, and appear somewhat long. Her nose should be of a rich yellow color, or at all events not black; (we do not know of any full blooded stock, of any breed, with black noses, but frequently appear on stock as high bred as fifteen-sixteenths.) Her neck should be very small where it joins the head, but widening and deepening as it approaches the shoulders and briskets. Her udder should be of good size, well covered with long, soft hair, and not inclined to freshness; large milk veins, and small delicate horns—they may be long in some breeds, but they should be fine, and she should have a yellow skin.

To be a good breeder, she should, in the first place, be descended from good stock, and the farther back you can trace her from good stock the better. She should possess all the before-mentioned milking qualities, with a broad straight back, wide loins and hips, long deep quarters, round ribs, bones small, in proportion to her size, deep and full brisket, fore legs wide apart and short, and lastly, she should be a *good handler*. A cow that is a good handler will also almost invariably produce a rich milk; and if a first rate handler, and possessing the before mentioned qualities, she will be invariably a good feeder. This handling quality is, or has been, too much overlooked by breeders and judges of cattle shows. We should not think of purchasing a cow for milk, stock or beef, without knowing her to be a good handler.—*American Farmer*.

Method of distinguishing between Marl and Clay, and other Soils.

TAKE a specimen and dry it, pour a few drops of muriatic acid on it, or strong vinegar, which is most readily obtained, if effervescence ensues, it shows that the carbonate of lime is present, if clay, no such result will be visible; you will also in the first case distinctly detect a strong odor of burnt shells. If you wish to test whether the marl is rich or not, it may be done by the following simple process:—take a piece of the marl of which you wish to know the strength, dry it, pulverize it, and weigh it accurately; put it in a glass vessel, and add muriatic acid slowly, until all effervescence ceases, then filter the liquid through blotting paper, adding water to what remains in the filter; you then have a perfectly transparent fluid, which is the muriatic of lime; now by adding a solution of the carbonate of potash, a chemical decomposition takes place. In this way the muriatic acid forming the muriate of lime, having a much greater affinity for the potash, leaves the lime and combines with the potash, forming the muriate of potash, which is a soluble salt. The carbonic acid, in connexion with the potash, also having a greater

affinity for the lime, leaves the potash or combines with the lime, forming a carbonate of lime, (or the essence of marl) which being insoluble falls to the bottom of the vessel, forming a thick sediment, which is filtered, dried, and weighed, the result of which will give you the quality of the carbonate of lime, which is the quality of the marl. As this mode may not be practical enough for all, there is another more simple method; having dried a specimen, pulverize and weigh it, submit to the action of muriatic acid; as in the last case filter the mixture dry; what remains in the filter, which will contain sand and other impurities, this being weighed, the loss of the first weight will give you the percentage of carbonate of lime which has been separated by the action of the acid. These modes of analysis are very simple, and with a little, attention to the details, any one can readily ascertain the quality of the soil. Mr. Ruffin's mode of analysis is very expeditious, being able, by a simple glass apparatus which he obtained from Europe, to ascertain accurately in three minutes, the exact proportion of carbonate of lime. This instrument can not be explained in an article like this. It is on the principle of gas, displacing its bulk of water, by allowing so much water to so much of the marl submitted to the action of the acid. The calculation is then made.

Improving Grass Lands.

The following is a valuable statement respecting raising of grass, which is taken from an agricultural journal where it is attributed to an old experienced practical farmer:

"I will take an old piece of herds-grass, that at present yields less than half a ton of hay per acre; and at the end of five years, without breaking up, fresh seeding, or manuring in any way whatever, I will raise the crop to two and a half tons per acre; and this I will do by merely permitting the crop to stand till the seed are ripe enough to vegetate before cutting. By mowing the seed sooner than that, the roots bleed and die out, and that is the reason why a second crop does not spring for a long time after. I once purchased a fifth part of the crop of timothy on one of the islands in the Delaware, with the intention of cutting my lot at the same time the other purchasers, cut theirs; but I was called from home, and it was not done until the seeds would vegetate. I thought my hay was spoiled, but it was preferred to that of all others for horse-feed, and, behold the next year my lot of land yielded double the crop of the others; and at the end of five years, it had increased to two and a half tons per acre, having overgrown all other grasses—a uniform crop of five feet in height, and preferred before all others at the market. Since then, I have never cut timothy until the seed would just vegetate; and I would take a poor field that shows only a few spears of timothy growing in it, and by these simple means, engage in five years to cut two and a half tons of hay to

the acre of superior quality, provided the land be suitable to the growth of the crop."

The Essentials to Productive Farming.

THE following essentials for productive farming are from the pen of the editor of the *American Farmer*, which is, we believe, the oldest agricultural paper in the United States:

1. Good implements of husbandry, plenty of them, which should always be kept in perfect order.

2. *Deep ploughing* and *thorough pulverization* of the soil, by the free use of the harrow, drag and roller.

3. An application of *lime, marl* or *ashes*, where calcarious matter or potash may not be present in the soil.

4. A systematic husbanding of every substance on a farm capable of being converted into manure, as a systematic protection of such substances from loss by evaporation or waste of any kinds, and a careful application of the same to lands in culture.

5. The draining of all wet lands, so as to relieve the roots of the plants from the ill effects of a super abundance of water, a condition equally as pernicious as drouth, to their healthful growth and profitable fructification.

6. The free use of the plow, cultivator and hoe, with all *row-cultured* crops, so as to keep down, at all times, the growth of grass and weeds, those pests which prove so destructive to crops.

7. Seeding in the *proper time*, with good seed and an equal attention to time, with regard to working of crops.

8. Attention to the construction and repair of fences, so that what is made through the toils and anxious cares of the husbandman, may not be lost through his neglect to protect his crops from the depredations of stock.

9. Daily personal superintendence, on the part of the master, over all the operations of the farm no matter how good a manager he may have, or however faithful his hands may be, as the presence of the head of the farm, and the use of his eyes, are worth several pairs of hands.

10. Labor-saving machinery, so that any one may render himself as independent as needful of neighborhood labor, as a sense of the comparative independence of the employer upon such labor begets a disposition of obedience and faithfulness on the part of the employed.

11. Comfortable stabling and shoes, for the horses and stock, all necessary out-buildings for the accommodation of the hands, and protection of the tools and implements, as well as for the care of poultry.

12. *Clover* and other grasses to form a part of the rotation of crops, and these to be at proper periods plowed in, to form the pabulum for succeeding crops.

13 To provide a good orchard and garden—the one to be filled with choice fruits, of all kinds—the other with vegetables of different sorts, early and late, so that the table may, at all times be well and seasonably supplied, and the surplus contributed to increase the wealth of the proprietor.

SMITH'S CORN-SHELLER.



This Machine consists of a horizontal toothed cylinder, six feet long, and one foot two inches in diameter. The ears of corn, in the operation, are confined to a part of the upper and rising side of this cylinder, by means of a cast iron-concave extending the whole length of the machine; and being admitted into the machine at one end, they are driven through, and the cobs discharged at the opposite end, while the grain falls below the cylinder. The operation is governed by elevating or depressing the discharge end, which causes the machine to throw out the cobs faster or slower; thus securing to the operator the power of finishing his work. The machine is capable of shelling thoroughly one hundred and fifty bushels of ears of corn per hour.

Mowing Pastures.

We have before spoken of the necessity of keeping the grass of pastures from running up to seed and dying on the ground. As grass grows with more rapidity in the early part of the season than at a later period, it is difficult to keep it properly fed down, without putting on more stock than can be kept on the land after the *flush* of feed is over; and yet, if the grass goes to seed and lies on the ground, the after-feed will be less in quantity and of poorer quality. The difficulty may be overcome by mowing at the proper time—before it has run to seed, at all events. This may be done on many pastures to good advantage, the hay obtained being of good quality for any kind of stock; and the pastures are left clean, start equally, and afford a good growth of fresh after-feed.—We have lately met with several farmers who have followed this practice for many years, and they agree with us in regard to its utility.—*Albany Cultivator*.

Cutting Grass and Curing Hay.

This must depend on the kind of grass cultivated. Timothy affords nearly double the quantity of nutriment, if cut after the seed has formed, instead of while in flower, and it is then much more relished by horses and a portion of the stock. This grass, therefore, should never be cut for them, except when the seed is formed.—The proper time for harvesting, is between the milk and dough state, when it will nearly ripen after cutting.

Orchard grass, on the other hand, although possessing two-sevenths more nutritive value for hay in the seed, yet it is more tender, and much preferred by stock, when cut in flower, and as it continues to grow rapidly afterward, it should always be cut at that time. Even a few days will make an important difference in grass, when cut for hay. The kind of grass, and the stock to which it is to be fed, cannot, therefore, be too closely noted, to detect the precise moment when the grass will best subserve the purpose for which it is intended.

Many farmers do not consider the scorching effects of our cloudless June and July suns, and the consequence is, the hay is too much dried in this country. Unless the grass be very thick and heavy, it will generally cure sufficiently, when exposed in the swath for two days. When shook or stirred out, it should not remain in this condition beyond the first day, or it will thus lose much of its nutritive juices; nor should dew or rain be permitted to fall upon it except in cocks. It is better after partially drying, to expose it for three or four days in this way; and as soon as properly cured, place it under cover. It is a good practice to salt hay when put up, as it is thus secured from damage from occasional greenness; and there is no waste of the salt as it serves the double object after curing the hay, of furnishing salt to the cattle and the manure heap.

Clover should be cut after having fully blossomed and assumed a brownish hue. By close cutting more forage is secured, and the clover afterwards springs more rapidly and evenly. The swath, unless very heavy, ought never to be stirred open, but allowed to wilt on the top. It may then be carefully turned over, and when thus partially cured, placed in high slender cocks, and remain till sufficiently dry to remove into the barn. Clover may be housed in a much greener state, by spreading over it in the mow, from ten to twenty quarts of salt per ton. Some add a bushel, but this is more than is either necessary for the clover, or judicious for the stock consuming it; as the purgative effects of too much salt induces a wasteful consumption of the forage. A mixture of alternate layers of dry straw with the clover, by absorbing its juices, answers the same purpose, while it materially improves the flavor of the straw for fodder.

Under-draining Meadows with the Subsoil Plow.

SOME of our best farmers have lately adopted, with entire success, the system of underdraining their heavy clay and wet

meadows. This is done in the most summary manner, by attaching two yoke of good oxen or two pair of horses to a strong subsoil plow which penetrates to the depth of 15 or 20 inches below the surface. The soil is divided and separated by the plow to a distance scarcely exceeding one and a half inches, which immediately closes after the row; and if moist, when the operation is performed, the turf speedily unites and not even a line is visible beyond a few days.

By this operation, a large underdrain is left at the bottom of the furrow where the point, or nose, and wing of the subsoil plow has passed, and nearly of their size, which in stiff soils, will remain open for weeks. On meadows where there are puddles of standing water, as is always the case after rains, the effect is instantaneous. If the plow has been started in a ravine or low part of the meadow (as it should be, so as to form a descent for the surface water,) when it passes through the little basins, the water vanishes as if by magic, and it is heard gurgling rapidly along its new found aqueduct till it reaches the outlet. In addition to this more immediately perceptible effect, if the meadow thus drained be closely watched for a few weeks, and especially during wet weather, a marked improvement will be noticed, over similar undrained meadows. The grass will be thicker and yield a heavier growth of sounder and sweeter forage.

The distance of these furrows, or drains, should vary according to the compactness or tenacity of the soil, and the frequency of the basins to be drained. In the heaviest soils, the drains may be advantageously run within ten feet of each other. If less adhesive, and few pond holes exist, the furrows may be a distance of 20 to 30 feet. No meadows unless the lightest kinds, will be injured by this operation, while all others will be decidedly benefited. This results from the imperceptible, yet rapid drainage of the water which is held in excess by the soil, and the escape of which is so beneficial to the vegetation.

This operation has been adopted in England many years since, but with an implement considerably differing from the subsoil plow. It consisted simply of a pointed iron some three inches in diameter at its largest end, which was connected with the beam by two strong coulters. The iron point was often sent three or four feet below the surface, and required a strong force to move it. This implement has been principally superceded where first adopted by the substitution of thorough and more permanent tile under-draining.—*Lancaster (Pa.) Gazette*.

“LINSEED OIL will destroy all kinds of lice, which are found upon cattle, or upon any kind of quadrupeds. It will effectually destroy fleas on dogs or cats.”

The oil must be thoroughly rubbed in the hair of the animal, leaving no part untouched.”

THRIFT follows industry and economy.



The Farmer and Planter.

PENDLETON, S. C.

Vol. I., No. 6::: August, 1850.

WE regret that we are obliged to postpone B*****E's article—it will appear in our next.

The Cow Pea.

A respected subscriber near Georgetown, S. C., desires some information "as to the variety of the Cow Pea—its culture—the best time for planting—the best variety for our climate—how to preserve the seed," &c.

Of what is usually called the *Cow Pea* there are a great many varieties, probably not less than thirty. James M. Garnet in the 9th Volume of the *Farmer's Register*, enumerates under the general name of *Indian Pea*, some twenty varieties which he knows, only one of which he calls the *Cow Pea*. He says, "Eight of this number bear the general name of '*Crowder*,' from the circumstance of their growing so much closer in the pod than the peas of a long shape like the snap-bean, that each perfect pod contains usually about one third more peas than an equally perfect pod of any of the long shaped varieties.—Of the *crowders* I have seen the following kinds, viz: the black, the white with black eyes, the pale, yellowish clay-colored, the gray, the sugar, the purple hull, the claret-colored, commonly called the red tory pea, and the small, reddish-yellow *crowder*. Of the other varieties, (not *crowders*,) I recollect four that are white with black eyes, and varying chiefly in size, the largest being considerably larger than any other pea I have ever seen. There are two kinds which may be called white, but less so than the four first named: one has a pale greenish eye, and with us is called the North Carolina pea; the other is of the same shape and size, but has a reddish eye. Then there are the white and red mottled pea, the cow pea, the black tory pea, the small lady or gentleman pea, and the green or Chickasaw pea, which is the smallest of all, and the only one whose vines do not run. Hence they are preferable to all, where the purpose is to use pea vines as a green dressing. Each of the above mentioned varieties has several local names, which I do not recollect, or I would give them, as it might make all the kinds, perhaps, better known than my general description."

We have seen most of the varieties enumerated by Mr. Garnet, and some few others that are not included in his list. We many years since cultivated a small, rather flat white pea, with irregularly defined pink clouds on each side. This pea matured so early as to admit of raising two crops

yearly. From some cause we lost the seed, which we have much regretted, as we have never been able to procure a new supply. There is a small white, very flat pea, that has been growing on the plantations of Mr. A. F. Lewis and the late T. M. Sloan, lying on the Seneca river, near Pendleton, for many years, which we have never seen elsewhere. This is probably a hardier pea than any other, whatever. Without any care taken for its preservation, it appears yearly and most abundantly after a small grain crop.—It was the opinion of Mr. Sloan, that if buried deep, it would lie in the ground two or three years without destroying its vitality, and on being brought again near the surface, would sprout and come up. This would, we have no doubt, be one of our most valuable peas to sow with small grain for the renovation of exhausted soils. These are the only sorts that we know in addition to the above that have any peculiar quality.

We cultivate the *black* and the *red* (usually called the tory pea) as a preference, for stock, to be fed on the land—and for gathering, the large yellow, (distinguished as the cow-pea)—the white with black eyes, and the small, white lady pea for table use. We prefer the black and red, and especially the black, to be fed to stock on the land, because they are not so liable to rot as are the other varieties. All the others, if not gathered early after maturing, will mould and rot more or less—according to the weather—which is most probably the cause often times of serious injury to stock. They will also rot if planted too early in the spring, especially on stiff land before it becomes warm.

We plant peas with all our corn, on the same ridge, and between each hill of corn—from six to twelve peas in a hill—would prefer planting in our latitude about the first of May, they might in the low-country be planted earlier. Many plant with us at the time of the second plowing of the corn. When planted with corn the culture is the same.

If the object in planting the pea is principally for the benefit of the land, then we would advise planting them alone and in drills some four feet apart. We have what was last year a sedge field in peas. The land was plowed last winter with a two-horse turning plow followed by a sub-soil, also drawn by two horses. About the 1st of June, it was planted in drills as above, and covered by ridging on them with a light running plow; since then we have run a sweep, or buzzard, three furrows between each row, and are now, (July 22nd.) chopping out the weeds (there is no grass) on the ridge. This will probably be all the work they will receive. We intend allowing the crop to mature, and feed off to hogs, only, in the fall, and to follow with rye manured with cotton seed.

The feeding off to hogs may be condemned by some who would prefer turning in the vines for the benefit of the land. We would however, and especially on light land, greatly prefer this course, and we have no doubt that many of our low country friends, have been much disappointed in their efforts to improve light sandy soils by

turning in pea vines, from the fact that the land is thereby rendered less compact than formerly, less retentive of moisture, and consequently, although with a considerable addition of vegetable matter, not much more productive. In feeding off, nothing is lost except what goes into the increased bulk of the animal, which in gathering its food, will regularly distribute its manure over the land. This, with the benefit it will receive from the hoof, will more than counterbalance the amount retained by the animal.

There is no difficulty attending the preservation of the seed, provided the peas are gathered when dry. They may be threshed out, cleaned, and put into barrels or boxes, or they may be preserved in the pod on a dry floor—a loft would be preferable—until wanted for seed, and then threshed. Upon the whole, we consider the pea a less troublesome crop to manage, than any other we cultivate, and one of the most profitable ones to a man desiring to fatten either land or animals, from man down to the hog.

Other information desired by our correspondent, we must defer to another time.

Southern Central Agricultural Association.

THE annual Fair of this Association will be held at Atlanta, Georgia, during the week embracing Wednesday, the 14th instant. The Fair of last year, held at Stone-mountain, was certainly a magnificent display of agricultural products, implements of husbandry, and fine stock, and we have no doubt the approaching occasion will be fully equal if not in advance of the one last year. If so, he who is not there, will lose much. We rejoice to see the spirit of agricultural improvement so much in the progressive. No where is it more so, certainly in the South, than in Georgia. The people of this State are becoming every where the subject of remark for their energy and enterprise in developing the resources of the State, and availing themselves of every means of advancement within their reach. There are few States in the Union for which nature has done more, and if Georgians persevere with the determined energy, they have been displaying for a few years, they will place the State upon an elevation not easily rivalled in wealth and power by the proudest State of the confederacy.

The address of the 14th inst. will be delivered by Col. John Billups of Athens. Invitation to be present is extended by the Committee of Arrangements to the "citizens of Carolina, Alabama, Tennessee, and Florida."

From the published regulations that will govern the assemblage we take the following:

"4th. There will positively be required in all cases a minute and accurate written statement, illustrating and explaining every article sent for exhibition. The statement to be delivered to the Secretary. For instance, if a machine, a statement of its powers, and uses, cost, time of invention, and any other facts deemed valuable by the inventor or maker. If

horticultural or agricultural products, the mode of preparation of land, soil and manure, and time of planting, mode of cultivation, &c. If an animal, the pedigree or stock, age mode of raising, &c. If needle work or painting, or any work of art, the length of time and amount of labor bestowed on it; their age, if by children or very old persons—value, uses, &c. *Since this is the most reliable mode of collecting such information as may be worth publishing in the transactions of the Society, visitors, members, patrons, all will take notice that a premium will not be awarded to any article, whatever its merits, unless accompanied by illustrative and explanatory statements made out in legible hand and in a style fit at once for the press.*

5th. The delegations of the several county societies are requested and enjoined to make out upon consultation, a report of the present condition of agriculture in their several counties—of the improvements of farming, drainage, tillage, manuring, which have been or are now in progress of being adopted; also of the leading products of their counties, mode of preparation, time of planting, and mode of cultivation. The means and measures of preserving and increasing the fertility of their land—accurate memoirs from the several county societies, would make up an amount of most valuable information, to be sent out in the published transactions of the Central Association.

7th. *Premiums.*—It is impossible to name in a notice like this all the various articles to which premiums will be granted. However comprehensive we might make any enumerated list, there would still be many articles of merit offered which would not be embraced in it, and yet richly deserving premiums. *Lest, therefore the announcement of premiums for particular articles might be construed by some into an exclusion of all articles unannounced, the Committee request the people generally to observe that it is intended to give the action of the Association the very widest scope, embracing every thing that is useful and ingenious in business or art.* All then, with whatever they have for sale or exhibition, are invited to come. The only regulation further necessary on this point perhaps is, that on all articles of the highest merit in the departments of Stock, Mechanics, Agricultural implements and valuable improvements or inventions in any of the departments, a premium of a cup, worth ten dollars, will be given. On the second best article, a cup worth five dollars; on the third best \$2 50; on the fourth an honor. And on all articles of the highest merit,

in the remaining departments, a premium of a cup worth five dollars will be given; on the second best article a premium of \$2 50; on the third, an honor; and on the fourth best, 2nd honor. On minor and miscellaneous articles, premiums from one to three dollars.—These, however, are general regulations, and in particular cases, or cases of peculiar merit, the Committees will be permitted, indeed they are requested, to vary the general rules.

Original Communications.

Legislative Aid to Agriculture.

“FELLOW CITIZENS:—You are essentially an agricultural people. It is your mission on this earth, to feed the hungry and to clothe the naked. But for the industry and enterprise of the Southern Planter, commerce would soon droop her expanded wings—the wheels of a thousand spinning jennies would stop—and the arts and sciences languish. You are the bone and sinew of the country, and without you, government could not budge a peg.”

In this strain, a Mr. Stump Orator discourses, when he is soliciting your sweet voices, to give him a place in the Legislative assembly. Alas! how little his practice afterwards goes to prove the sincerity of his preaching! Travel dear reader you may, through the dim pages of past legislation, many long years, without finding much to cheer you. With the exception of a few thousands grudgingly bestowed, and unwisely expended (because partially) for an Agricultural Society of the State, we can show nothing.—We have said unwisely expended, because partially—let us explain. “Any work which is worth doing is worth doing well”—this is an axiom among farmers. It is admitted that the Yankees know something about thrift—there is not a single Northern State but has evinced a hundred times the zeal in developing her resources that we have. New York has spent freely hundreds of thousands of dollars in Geological surveys, and considers that she has been amply remunerated for every dollar expended, by the increased resources developed, by the hidden wealth discovered, by the new capital invested, and profitable employment of labor.

Science cannot develop nature's mysteries in a moment. It requires time, patience, indefatigable labor. There is not a single district in the back country which would not require a year's close investigation, for a Geologist to do it ample justice. The surveys by Ruffin and Tuomey were necessarily, very imperfect.

They had neither the time nor the means; and they have just shed light enough on the subject to make darkness visible. If Mr. Tuomey had been employed for ten years, at a salary of \$2,000 per annum—he would have had ample time and means, to complete a work creditable to himself, and valuable to the country. But many gentlemen would hold up their hands in holy horror, at the bare suggestion of \$20,000 being expended in ten years, for Agricultural purposes—who would never grunt at the knowledge that \$47,400 are annually spent in military pageants—near \$30,000 in the payment of constables and magistrates, to ferment disorders and encourage lawsuits; \$10,000 for contingencies—nobody knows what; \$5,000 for public printing of rigmoroles in general—\$23,991 for the South Carolina College, an institution, in which not one hour in the day from year's end to year's end, is devoted to the teaching the science of Agriculture. Now is there any justice in this? The Agricultural interest of the State is taxed annually to support an institution of learning, which retards rather than advances its interests. Let us not be understood as wishing to detract from the usefulness of the College. We would not take a dime from the annual appropriation if we could. But we would reorganize some of the departments—we would make a professorship of Agricultural Chemistry and Geology—and we would do this, if we had to abolish half a dozen other branches there taught.—New professorships have again and again been recommended—some in fact established—but notwithstanding, Chemistry and Geology as applied to Agriculture, have become the rage almost every where else, it is unknown here.

It is high time we were letting metaphysical abstractions alone, and beginning to think of something of practical importance. A professorship of Agricultural science in South Carolina College would be worth now, to the people, more than all the metaphysics of the Schoolmen and the Greek of Homer and Aristophanes.

We ask no aid from the Legislature except what is perfectly legitimate. We do not ask them to make our lands richer or the seasons better, we do not ask for negroes and mules to cultivate our crops—but as we pay a large proportion of the tax to support the government, we have a right to feel some interest in its expenditure. If \$47,400 can be spent for military purposes generally—if \$2,491 can be

expended for a digest of Magistrate's laws, \$6,400 for repairs of military academies, \$10,000 for contingent acts, \$15,000 for improvements to a Lunatic Asylum, \$23,991 for the College and so on to the round sum of \$200,000 or thereabouts—we can see no reason why something might not be expended for] developing the] Agricultural resources of the country—in better educating the poorer classes—in establishing an Agricultural Professorship in our College.

We have a right to all the aid that science can give us, in fertilizing our fields, beautifying our homes or enlightening our people, and it is the duty of our sovereign masters to provide it.

Many persons will call this all stuff—humbug—calculated to do no good.—Many persons hooted at Fulton's Folly—at Rail Roads—at subsoil plowing, and at a hundred other things which have now become fixed facts. Unchangeable prejudices exist now in the breasts of many well meaning individuals against science as applied to Agriculture. They will remain there till the education of their children removes them. It is hopeless to think of reforming them—but we live for posterity, and it is a duty of every individual member of society owes to himself, and to those who come after him, to add to the honor, dignity, and importance of the profession in which he labors.

BROOMSEDGE.

Big Branch, June 30, 1850.

Farming---Attention to Small Things the Secret of Success.

MESSRS EDITORS:—If you will allow me the use of a brief space in the columns of the Farmer and Planter, I will make a few hints upon matters relating to farming.

I fully believe that too much cannot be said in favor of subsoiling our lands and protecting them against the washing rains, that bear so rudely away from the soil, the elements essential to its productiveness. These matters, together with rotation of crops, drainage of wet lands, are receiving, I am glad to see, due consideration at your hands. The ravages occasioned by their neglect throughout the South are too apparent to be mistaken, and all except the voluntarily benighted and those into whose mind no light can shine, are now convinced of what ought to be done to render their lands productive and their homes permanent. But there are other things to be attended to besides these fundamental principles of successful farming. There are many trifles, so considered, that make the profit or loss of the husbandman, and in the observance of these lies the good management of the farmer, or in their neglect is the secret of his failure.—In the first place, it is a matter of moment for

those of us, who cultivate diversified crops, to ask ourselves, if we have our stables, granaries, and out buildings, properly located, and conveniently constructed. Are the stalls and troughs for our horses so constructed as to be comfortable and to prevent waste of food? do we use chopped fodder, corn, or meal? do we vary the food or continue the same? do we make thorough use of the curry-comb morning and night? is our stock in good condition at the time of laying by our crop? Have we good collars and traces for our horses, or do we use grape vines and hickory-withs? have we good plows, harrows, hoes and every kind of implement necessary to facilitate and save labor, and do we suffer these to lie out in night dews and rains, or have we a place for each one beneath a shelter, and do we take care that each is stored in its place when not in use?

Do we feed our milch cows night and morning upon peas, turnips or meal, or do we suffer them to go only with what they can pick up in the range, and then complain that we are without butter and milk, and that our cows, miserable milkers, are dry the greater part of the year?

Have we set apart a piece of land, and manured it well, to be sown in Rutabaga turnips? if not, is it not time to do it immediately?

Do we, as a matter of grace, feed our cows on decaying cabbage leaves, and expect to have butter fit to be used?

These are but a few of the many questions that farmers might ask themselves with profit, but I will forbear pressing more upon the mind of the reader lest he fail to heed any of them.—It is a very general fault among the best managers that small things are passed by as too insignificant to deserve attention.

This is a great mistake, and never shall we be a thrifty, independent, good-living people, until we change our habits in this respect. The trifling occurrences of every-day life make up the sum of human happiness or misery, so do the details of planting and farming constitute the gain or loss. Vast crops of rice may be made and handsome prices realized—bales of cotton may be heaped on bales, till Ossa be piled upon Pelion, and if the little conveniences and delicacies of every-day life are not at command, we fail to secure the object of all our exertions.

FAIRFIELD.

Report of the Committee on Stock to the Pendleton Agricultural Society.

THE Committee on Stock beg leave to report that the subject referred to contains, by its generic term, "stock," every species of stock common to the farms in this country; and, therefore, to do justice to it, a wide range ought to be taken, embracing not only the general principles applicable to every species of stock, but those also, peculiar to particular species. It would have been proper that the subject should have been divided, and subdivided, and that committees should have been raised with the special charge of the

several species. The labors of this Committee, therefore, from the wideness and extent of the subject, have only been devoted to such general rules in the management of stock, as are applicable to the whole subject and the entire species.

There is no other subject connected with agriculture and rural economy of more importance, or that deserves more the attention of the Farmer than the proper management of his stock. It is to the good condition that he is to look for one of the essential articles of his food, and the comforts of good living which a fat and well fed stock affords—and what more pleasing reflection than that he can look for it at home—to his own herds and flocks, without depending on a foreign market or on his neighbors for a supply. The true interest of every farmer, is to raise his own provisions; and he is a discredit to his profession who fails or neglects to do it, unless from misfortune, which none can guard against. It is this great error, or neglect that has brought the cotton regions of our country into such a shameful and ruinous dependence on the West; and it will not be, until our Southern planters redeem themselves from this reproach, that they can be said to be an independent people.

How much of the wealth of our State is annually drained from us by this source, the statistics of commerce will show. It is great and will keep us poor and dependant unless we determine to shake off the shackles and raise our own supplies. Already we are laboring under the disadvantage of over production in our great staple, and the remedy is obvious and palpable, that we should raise less cotton and more provisions.

But the melancholy truth is, we are so much in the habit of starving our land, that our hungry and starved stock are the poor sufferers by our ruinous course of agriculture. The lands of many portions of our country are not sufficient in their impoverished condition, for the support of the inhabitants, and they cling to the last spot of good soil in the cultivation of cotton, with old worn out and gullied fields surrounding them on every side, and when that is gone, they flee away to some new country.

Feed the earth well and she will enable us to feed our stock, and they will return and repay us must bountifully to the earth for what they consume. This wise and beautiful arrangement makes the vegetable and animal kingdom mutually subservient and dependant on each other.

which topic was alluded to and explained in the general address on this occasion.

The value of stock, and every species of farm animals in making manure, is indispensable; and both the quantity and quality of the manure depends on the good keeping of our stock. A starved cow, or horse, or hog will yield but little manure and of poor quality.

Not only then does humanity and kindness but interest dictate, that they should be well kept—that is, well fed and sheltered from the influence of cold. In order to do this, we should not attempt to keep more stock than we can keep well. A contrary practice has been a great error among our farmers. The same rule will apply in the cultivation of our land and in the management of our stock.—As one acre of land may be made to produce as much as two by manure and good culture, so a well kept animal is worth two half starved ones. The rule may be extended in both cases to the quantity of manure we apply to our land, or the amount of food and attention we give to the animal. As a proof of this fact, refer to the extraordinary productions of highly manured lands and to the prodigious weight of some animals that have been reared in our country. And the analogy will hold good in the starving process.—Starve the land and we reap a poor harvest—starve our stock and we rear a poor animal. And the effect of the one is sure to produce the other.

If we wish to improve our stock, the first step is to improve our land; introduce the grasses, either native or exotic, and fill our barns full of the pea-vine, a plant which providence seems to have provided especially for our country, not only for the sustenance of our stock, but the resuscitation of our lands. It is a most astonishing fact that this most valuable plant has been so little appreciated, and so slowly introduced among us. Many parts of our country are yet wholly unenlightened with regard to the many and important advantages to be derived from this invaluable plant. Why are we so far behind other countries in agricultural improvements? Because it has heretofore been considered that we had no plant like the clover, that would give rest to the land, and enable it to recruit its exhausted energies, and food to our stock. But here is a plant indigenous to our soil and climate, that will rival the clover in all its beneficial qualities. It gives a rich and nutritious hay to our stock, when cut in a succulent state. On this subject I will

state a fact related by Col. F. H. HUGER, (whose name is a sufficient voucher for any statement he makes,) that he had kept his entire stock of horses, consisting in part of a pair of carriage horses in high condition, during six months of the year without feeding one barrel of corn to them.

Another great value of the pea is besides affording a bountiful provender to stock, it will give a rich provender to land, thereby fulfilling the important principle above stated, of feeding the land in order to enable the land to feed the stock. The one is indispensable to the other, and hence the melancholy fact, that a poor and starved stock is the invariable badge of a low miserable state of agriculture. Whilst the evidence of the rule invariably holds good, either individually or aggregately, that a fat and thrifty stock is a sure evidence of good farming and improvement in agriculture.

And what pleasure it must give the farmer always to have his stock in good condition—to be the almoner of the rich blessing of fullness and fatness to the creatures dependent on his bounty. What heart is there who is not made glad by their gay and frolicsome gambols, and the lively evidences they give of their good condition. The dictates of humanity, then, and the best feelings of our nature, impel us to be liberal and kind to the dumb progeny of our farms, as well as our highest interest also; and the best economy we can adopt, is only to keep as much stock as we can keep well, and to be particular and careful in the selection of the best breeds to rear from.

On the subject of adopting the improved breeds, there is a strong prejudice to overcome among the great body of the farmers of our country. Many suppose there is no difference in the breed of animals—that the only difference is in the keeping. On this subject I will relate an anecdote which I have heard often as a confirmation of this opinion. A farmer who kept his hogs so well and improved their breed so much as to receive many applications for breeders—took the applicants to his corn crib and told them there was the secret of his good hogs, and the argument is, that the same will apply to all stock. But the experience of other countries which have advanced the various breeds of animal almost to perfection, is a sufficient contradiction of this principle. Look at the result in the blooded horse. The beauty of form and symmetry of parts, and his wonderful superiority over the scrub horse, are all the effects of the great

and extraordinary attention to breeding from the best animals and the purest blood. Why, if the same attention, and for the same period had been paid to the breeding of man that has been applied to horses, we should have a race of men of the highest physical organization and perfection—and that on a principle of an invariable law of nature, that like produces like. The physical qualities of all animals are hereditary, and transmissible by one or the other parent to their progeny. This subject has lately been reduced to a science, and the ingenious and plausible Theory of Walker, should be closely studied by every man and woman, as well as every farmer. But I am forbidden from pursuing this branch of the subject; my only purpose was to throw out some hints that I hope will be carried out and more fully developed by the reader.

R. A. MAXWELL, Ch'n.

Improving New Land.

MESSRS. EDITORS:—Much has been said by agricultural societies and individuals with regard to the improvement of our old exhausted soils, to the utter neglect of our maiden land. I think the best, or at least, as good a plan as any, would be to lock the door before the horse is gone. I have a key which I have used myself for this lock for many years, which I propose to loan to the public through your kind agency. This key will work best by following my mode of plowing, which operation should be performed before clearing the land, while the woods are open, (I seldom if ever grub my land). This plowing should be done immediately after a heavy thaw, say after a snow when the ground is very loose or open, by this means a good coat of manure is given to the fresh land, it also leaves it open and loose all the season by being turned at the proper time. I think we should be as careful with regard to the proper season of the year to turn up our maiden land, as we are with regard to the proper season for the shearing of our sheep. No man would think for a moment of shearing his sheep in the winter, neither ought he to turn his new land after the freezing is over.—We, in general, are too apt to let lands of this description lie until perhaps the month of May, before we plow them. By this time there will be a heavy coat of grass, and perhaps a dry season which will, nine times out of ten, prevent you from making a good crop the first year. This mode of turning up fresh land to the hot summer's sun is not good; the change is too sudden to be healthy.

When you calculate the profits of the first crop, and the manuring your land by turning under all the leaves at the proper time, besides a preventive against fire, you will have a faint idea of the benefit you have derived from the use of this key.

I recommend early and deep winter plowing on all occasions. It is the surest key to all good

farming; it not only pulverizes and fertilizes the soils by turning up to early frosts, but it destroys all insects by freezing them, and destroying their winter's food, as well as giving you the double advantage of manuring your crop in the spring. The soil will remain mellow all the season, yielding you in the fall the additional advantage of a heavy crop.

If you have stable manure, put it out broad cast on the soil that is not exhausted, if you manure but ten acres during the season, do it well; it is just as profitable to feed your land well, as it is to feed your horse well; a fat horse is much more profitable than a lean one. Just so with your land, hence the necessity of taking care of the constitution of both.

If you have galled spots in your field, put your straw or leaves on them five or six inches deep, and plow them under immediately.

Plant all your Indian corn in the drill, either on old or new land. Give good distance, and do not plant until nature has shown herself in the forest, or until the thermometer has risen above 42°.

I advise that you double bed your cotton land, especially in low, wet land, thereby throwing the bed up as high as possible, this gives warmth and serves as a drain to the land.

W. D. A. DEAN.

REMARKS.—We very much doubt the practicability of getting up such a society as our correspondent suggests, in a part of his communication that we have omitted to publish. If the Farmers and Planters of our country would form clubs in every captain's beat, and hold regular meetings for the purpose of discussing matters of interest to them, it would be well. These, in addition to at least one agricultural society in each district,—to which every man cultivating as much as a garden should contribute as a member—would be calculated to do much good in drawing out valuable information from many of our sensible, homespun farmers, that are not disposed to write, and inciting the whole agricultural community to increased energy in their honorable and most useful profession.—Eds.

Pulling Fodder.

As fodder pulling time is at hand, it will be well for the Planter to examine into the utility of taking the leaf from the Corn. Have you ever thought, Planters, of the object of the leaf? How much corn would a stalk perfect, think you, were the leaves all varnished, thereby entirely closing the pores? Why the grain would be shrivelled and worthless; for it is through the pores of the leaf that the cob and kernel draw nutriment, as well as from the roots. What sane planter would think of cutting off a portion of the corn-roots just as the grain was filling out? And yet the principle is the same. Actual experiment has demonstrated that a field of corn left with the leaf unmolested, will gain more in weight than the value of the Fodder pulled—to say nothing of that which should decompose and go to make corn again. It is even a doubtful policy to feed a horse on fodder; for there are more coughs, bellows and such diseases, caused by bad fodder, than most people are aware of. Oats, hay, or shucks are better, because cleaner, and even more nutritious. And whilst upon this

subject, we would recommend every man who keeps even one horse, to procure a straw cutter; it will save its cost in one year. No owner of two or more horses should be without one.

But where shall we get our hay from? says the Planter. Not from New England, certainly, but from any field that you choose to plough.—The grass that all your hands are fighting, makes as good hay as any of the Northern clover, and it can be had for cutting, any where. All it wants is to stir the earth, and like Jonah's gourd, it springs up in a night. Nothing outgrows it, and properly cured, horses and cattle of all kinds are fond of it, for it is their natural food. We believe that four crops a year may be cut from the same ground. Why, could the Northern farmer raise his timothy, clover, or herd's grass as easy, his horses would never know the want of food, and butcher's bills would not be half so extravagant. Surely we are a strange people!—Rob our corn-cobs of their grain—exhaust our lands, and ruthlessly kill and exterminate the very grass designed by nature for the sustenance of our stock.—*Columbus Enquirer.*



Horticultural Department.

Vegetable Calendar for August.

CABBAGES.

Transplant all the plants of the different kinds of cabbage. Those that were sown in June, must be now fit to put out; place the sugar loaves, early york, and smaller kinds in rows two and a half feet apart, and about two feet in the rows—the larger kinds, as the drumhead, savoys, &c., require the rows to be about three feet, and the plants two and a half feet apart.

You may now sow the early kinds of cabbage, for use in November and December; but protect the seed beds from the hot suns and heavy rains.

If you wish early spring cabbages, sow *European seed*, to be transplanted in November.

CARROTS, SALSIFY, BEETS AND PARSNIPS.

Sow these seeds at any time in this month, but they should have some protection afforded them; they will amply repay for the time spent, in making the requisite coverings to protect them from the hot suns and heavy rains.

Bushes stuck in between the rows, and reeling a little to one side, or raised on crutches about four feet from the bed, and open on all sides, to allow a free circulation of air, will answer the purpose very well.

If your seed is genuine European they

will be fit for use all winter, and until late in spring.

CELERY.

Continue to transplant celery where you desire it, and have plants fit to put out.

TURNIPS.

Early in this month, you may sow full crops of all the different kinds of turnips. The most preferable for the Charleston market, and consequently most saleable, are the early Dutch, early white stone, and early red top, generally used in soups; and the Norfolk, Hanover or tankard, yellow Aberdeen, and ruta бага, for mashing and serving up with melted butter, salt and pepper, or cayenne.

The early Dutch and early garden stone, are the best kinds to sow for a first crop. These should be sown on a light soil, dig the ground well, or plow and harrow it, lay it off in beds three or four feet wide, with good bold alleys, making the beds higher in the middle than the sides, and giving them a good slope, that the water may not lie on them; draw drills twelve or fourteen inches apart, and sow the seed regularly. They are very liable to rot by the time they attain the size of a dollar, in consequence of the hot suns and heavy rains. A half ounce of seed will sow a bed four feet wide and twenty-four feet long.

KOHL RABBI.

These may be sown at the same time, and treated in every respect as the ruta бага.

SPINAGE.

Sow a full crop of the round seeded spinage, at any time in this month, to come in for use in the fall. Dig the ground well, turning it up a full spade deep; lay it off in beds four feet wide, and draw drills about one foot apart.

The leaves of spinage, are liable to be eat up by worms at this season.

LETTUCE.

Sow in moderately low land, (for an early crop,) any time in this month. The early cabbage, grand admiral, and royal cape head, are much esteemed.

RADISHES.

Sow the short top, and turnip radishes, every fortnight to have a regular supply; water often, before and after they come up, if the weather is dry.

ONIONS.

Sow onions towards the latter end of the month, sow them thick in drills about one foot apart; those are to be transplanted in October and November, where they are to remain till they are full grown.

SNAP BEANS.

Continue to plant snap beans, they will come in at a good time to pickle.

Hoe your beans which were planted in former months, and haul the earth well to their stems; this you will do often, as it greatly promotes their growth.

ENDIVE.

If you sowed any endive in the last month, they will be fit to put out some time this.

Transplant them in rows, twelve inches apart, and ten or twelve inches in the rows.

You may sow more endive in this month if desired.—*Southern Farmer*.

Housewife's Department.

The Education of Farmer's Daughters.

EDS. CULTIVATOR:—Most of the farmers of our country are the sons of Farmers; and most of their wives are the daughters of farmers. This shows the propriety of educating our children with reference to our own occupation. The first and most important step towards the improvement of the great agricultural community, is the improvement of the mind by a proper early education. Until they as a class, are as well informed as those engaged in other pursuits, they must and will feel a degree of diffidence, a want of confidence in themselves. The most important duty we have to perform, either as parents or citizens, is that of properly educating and bringing up our children. Until the farmers so discharge that duty, as that their descendants rank equal with those engaged in other pursuits, they will be guilty, as they too long have been, of a great dereliction of duty.

I am pleased to see, of late, able articles in our journals, on the subject of giving our sons an agricultural education; but this should be coupled with a good common education, at least. I am proving the want of this in almost every sentence I write.

We should also remember, that the education of our daughters, is of equal importance, and that common justice requires that we give them an equal chance with our sons. It is true, our women do not vote at our elections, or hold political office, or manage the out door concerns of the farm; but it is equally true, that they exercise their full share of influence in all our concerns. They have the moulding, direction and training the minds of our children—the boys to the age of ten or twelve, and the girls to a much greater age; and nature has admirably fitted them for the performance of this important duty.— Their early impressions, derived from the mother, are indelibly fixed in their minds, and have great weight in forming their future characters. Most of us who had a mother living after we became old enough to recollect, can well remember the fine sympathetic feelings she possessed and taught us; and these are among the noblest feelings of the human heart. We can also well recollect the rigid principles of morality taught us by her, and the lasting impressions they made on our minds. If we look about among our acquaintance, we shall see that wherever there is a well educated intelligent mother, there is also an intelligent family of children. And this is a much more important matter than rearing of fine, high blooded animals with four legs.

If we will divest ourselves of pride and prejudice, and examine coolly, we shall see that our women have greater influence over us, than we are generally willing to admit.

Nor is the importance of educating our daughters less in a pecuniary than in a moral and in-

tellectual point of view. Much of the success, prosperity and comfort of every farmer, depends upon the management of his indoor concerns, by the wife. There is no occupation in which intelligent women are more useful than that of farming. If we will look about among our acquaintance, we shall see that wherever there is a wife of the right stamp—if the husband possesses ordinary ability and industry, they will be prosperous.— If I am right in this, it shows the necessity of educating our daughters, and giving them a proper training in all matters that relate to good housewifery. Let us fit them to make good farmer's wives, and they will answer for those engaged in other pursuits. We should first attend to the useful and substantial part—that well done, if we can afford it, do something by way of the ornamental. It is feared that our farmers pay too little attention to the former, and too much to the latter:

A young lady, with ever so fashionable an education if she possessed no knowledge of the kitchen, and the different departments of house-keeping, however well she might show off in the parlor or drawing room, would make a farmer a very unsuitable companion; she would not be worth as much as Lot's wife after she became salted, because he could procure from her salt for his porridge.

A WORD TO THE LADIES—NEW MODE OF MAKING BREAD.—Our readers may remember the notice we gave of the bread making machine of Dr. Lewis, exhibited at the late fair of the Mechanics' Institute. Having been favored by the Doctor with a recipe, we (that is, wife, self, and a couple of friends in family council,) concluded to try the experiment of bread making on the new plan. The first two attempts were failures, but the third was crowned with triumphant success, and since then we have had bread not to be equalled by the bakers—light, moist, sweet, free from the mixture of sour and bitter usually found in fermented bread. Here is the recipe for a good sized loaf, large enough to fill a common bread pan.

Take three pounds of flour; mix with it three teaspoonfuls of soda, passing the whole through a sieve, in order that the soda may be well mixed with the flour; to one quart of water add a table spoonful of muriatic acid in the liquid form; pour the mixture into the flour, and mix the whole just enough to get the ingredients fairly incorporated together. Wet the hand in cold water and mould into shape, elap it at once into the oven and during the cooking of any meal, with five minutes' labor, you can have excellent bread. The soda and acids constitute the elements of common salt, and they not only raise the bread by combination, but salt it in the bargain. Try the experiment, ladies.—*Chicago Tribune*.

A SHREWD old gentleman once said to his daughter: "Be sure, my dear, that you never marry a poor man; but remember, the poorest man in the world is one that has money, and nothing else."

THERE is a luxury in remembering a kind act.

Buckwheat Cakes.

Do, dear Jane, mix up the cakes;
Just one quart of meal it takes;
Pour the water in the pot,
Be careful that its not too hot;
Sift the meal well through your hand;
Thicken well—don't let it stand;
Stir it quick—clash—clatter—
Oh! what light delicious batter.
Now listen to the next command;
On the dresser let it stand
Just three quarters of an hour,
To feel the gentle rising power
Of powders melted in your yeast,
To lighten well this precious feast.
See, now it rises to the brim—
Quick—take the ladle, dip it in;
So let it rest until the fire
The griddle heats as you desire.
Be careful that the coals are glowing,
No smoke around its white curls throwing.
Apply the suct softly, lightly—
The griddle's face shines more brightly.
Now pour the batter on—delicious!
(Don't, dear Jane, think me officious,)
But lift the tender edges slightly—
Now turn it over quickly, sprightly.
'Tis done—now on the white plate lay it.
Smoking hot, with butter spread,
'Tis quite enough to turn our head.
Now I have eaten—thank the farmer
That grows this luscious mealy charmer—
Yes, thanks to all—the cook that makes
These light, delicious buckwheat cakes.

Female Education.

It was a judicious resolution of a father, as well as a most pleasing compliment to his wife, when on being asked what he intended to do with his girls, he replied: "I intend to apprentice them to their excellent mother, that they may learn the art of improving time, and be fitted to become, like her, wives, mothers, heads of families, and useful members of society." Equally just, but bitterly painful, was the remark of the unhappy husband of a vain, thoughtless, dressy slattern: "It is hard to say it, but if my girls are to have any chance of growing up good for anything, they must be sent out of the way of their mother's example."

Hot water should never be poured into glass vessels until they have been moderately warmed with tepid water; as the sudden expansion of the bottom has a tendency to force it from the sides. Thin vessels are better able to endure sudden extremes of heat and cold than thick ones, because they are sooner heated through their thickness, and consequently expand equally.

FRYING FISH.—A writer in the Boston Courier says that fresh fish should never be put in cold fat when they are to be fried. They thus absorb it, and become unfit to eat. The fat should be plenty enough to prevent the fish sticking to the pan, and boiling hot when the fish is put in. It is then cooked quickly, and is in fine eating order when taken up. These rules will not apply to meats.

Dairy Utensils.

All dairy utensils should be scalded, rinsed and dried every time they are used. Glazed pottery is not considered desirable for milk or cream, as the acid contained in them acts upon the glazing (which is

generally an oxide of lead,) and converts it into an active poison. Vessels made of wood are preferred by many to any others, for this purpose; although they are liable to become tainted with the acidity of the milk, in which case they can only be thoroughly cleansed by boiling; and when this fails, a little salaratus added to the boiling water will effectually neutralize the acid. The vessels must afterwards be immersed for two or three days in water, which should occasionally be changed. Milk vessels may be made of maple, white ash, hickory, or white pine.

A DROP or two of honey well rubbed on the hands while wet, after washing with soap, prevents chapping and removes the ruffness of the skin. It is particularly pleasant for children's hands and faces in cold weather.

Useful Receipts.

Indelible Ink.

THIS may be made much cheaper than purchased, as follows:—Two drachms of nitrate of silver, added to four drachms of a weak solution of tincture of galls.—Another:—Nitrate of silver, one drachm, mixed with a solution of half an ounce of gum arabic in half a pint of pure rain water. Moisten the cloth previously with a strong solution of pearl, or salt of tatar, and iron it dry.

GUMBO SOUP AS MADE IN NEW ORLEANS.—Take a fowl of good size, cut it up, season it with salt and pepper and dredge it with flour. Put into the soup kettle 1 table spoonful of lard, 1 of butter, 1 onion chopped fine. Next fry the fowl till well browned, and add 4 quarts of water. The pot being covered, must simmer for 2 hours. Then put in 30 oysters, a handful of chopped okra, a very little thyme, and let it simmer half an hour more. Just before serving up, add a half-table spoon of feelee powder. Soups must simmer not boil.

If made a day before and the grease skimmed off when cool, this soup may be taken with impunity by dyspeptics. VICTOR.

Pendleton, July 30, 1850.

INCOMBUSTIBLE WHITE-WASH—Pass fine freshly-slaked lime through a fine sieve, and to six quarts of the fine pulverized lime thus obtained, add one quart of the purest salt, and one gallon of water, and boil the mixture and skim it clean. Then to every five gallons of this mixture, add 1 lb. of alum, $\frac{1}{2}$ lb. of copperas, and slowly add $\frac{3}{4}$ lb. potash, and 4 quarts fine sand. It adheres firmly to wood or brick.

GREEN CORN PUDDING.—The Louisville Journal says one of the very best things every brought to the table, in the pudding line is green corn pudding, prepared according to the following receipt. Let every wife who would like to surprise her husband with a rare delicacy, try it.—Take of green corn twelve ears and grate it; to this add a quart of sweet milk, a

quarter of a pound of fresh butter, four eggs well beaten, pepper and salt as much as sufficient; stir it well together, and bake four hours in a buttered dish. Some add to the other ingredients a quarter of a pound of sugar, and eat the pudding with sauce; but epicures of the most exquisite taste declare for it, we believe, hot and with the first service.

"A word to the wise," &c. Try it.

TO COLOR AND PRESERVE BRASS ORNAMENTS.—Brass ornaments when not gilt or lacquered, may be cleansed, and a fine color given to them by two simple processes. The first is to beat salamoniac into a fine powder, then to moisten it with soft water, rubbing it on the ornaments, which must afterwards be rubbed dry with bran and whiting. The second is to wash the brass work with roche alum boiled to a strong lye, in the proportion of an ounce to a pint; when dry it must be rubbed with fine tripoli. Either of these processes will give to brass the brilliancy of gold.

ANTI-FRICTION COMPOUND FOR WAGON WHEELS.—Two parts in bulk of hog's lard, one each of wheat flour and black lead. Heat till the lard begins to melt, and stir the whole in a pasty mass. In very cold weather it may be softened by the addition of any cheap oil. This composition will well repay the trouble of making, and will kill all friction and squealing long after it is dry.

BRITANNIA WARE.—Britannia ware should be first rubbed gently with a woolen cloth and sweet oil, then washed in warm suds, and rubbed with soft leather and whiting. Thus treated it will retain its beauty to the last.

EARTHEN WARE.—It is a good plan to put new earthen ware into cold water, and let it heat gradually until it boils, then cool again. Brown earthen ware in particular may be toughed in this way. A handful of rye or wheat bran, thrown in while it is boiling, will preserve the glazing so that it will not be destroyed by acid or salt.

CLEANSING FEATHER BEDS.—If feather beds smell badly or become heavy from want of proper preservation of the feathers or from old age, empty them and wash the feathers thoroughly in a tub of suds; spread them in your garret to dry, and they will be as light and good as new.

TO PRESERVE PEARS.—Take out the cores, cut off the stems, and pare them.—Boil the pears in water till they are tender. Watch them that they do not break.—Lay them separately on a platter as you take them out. To each pound of fruit take a pound of sugar. Make the syrup, and boil the fruit in the syrup till clear.

SCRATCHES AND COLIC IN HORSES.—I have never failed to cure the worst cases of colic by drenching the horse with about half a pint of hop yeast. The yeast may be diluted with an equal quantity of warm water; and a half a pound of gunpowder well mixed with the same weight of hog's

lard will cure the scratches. Wash the part clean with soap-suds, and rub in the mixture several times daily for a few days. I have applied it as a poultice, by tying on with a strip of cloth.

Southern Planter.

TO KEEP CHIMNEYS CLEAN.—Instead of plastering the inside of chimneys the usual way, the Albany Cultivator says, take mortar made of one peck of salt to a bushel of lime, adding as much sand loam as will render it fit to work, and then lay on a thick coat. If the chimney has no offsets for the soot to lodge on, it will continue perfectly clean and free from all danger of taking fire. A trial of three years warrants the assertion.

BLACKBERRY JAM.—Allow three quarters of a pound of brown sugar to a pound of fruit. Boil the fruit half an hour, then add the sugar, and boil all together ten minutes.

TOMATO PICKLES.—Take tomatoes when two-thirds ripe; prick them full of holes with a fork; then make a strong brine, boil and skim it.—When cool, put your tomatoes in; let them remain eight days, and then take out and put them in weak vinegar. Let them lay twenty-four hours; then take them out and lay a layer of tomatoes, then a thin layer of onions, with a tea spoonful each of cinnamon, cloves and pepper, and a table spoonful of mustard; then pour on sharp vinegar. You may put them in jars if you like.

From the American Farmer.

Louisiana—The Cow Pea—Chilian Clover

I HAVE been a subscriber to your valuable paper for several years, and after reading it for some time I had an irresistible desire to become a planter, and after several years trying to wind up my mercantile business I finally succeeded in purchasing a plantation to my satisfaction, and whether I succeed or not, the American Farmer is accountable. So far I have done well. I bought on the 15th of January 1849. My crop of 210 bales of Cotton at present prices pays me 25 per cent. on my purchase money; besides an abundance of corn and every thing else to maintain the plantation hands, stock, &c. My Pea Crop exceeds anything of the kind I ever saw; they were planted with the corn at the last plowing, and by the middle of September covered the field so that the stalks were hid; I gathered as many peas as I wanted, and my neighbors came with their hands and wagons and took load after load until they were satisfied. I then turned in my stock of mules, cattle and hogs, and they remained in the field all winter and became fat. I have plowed it up and planted it in cotton, and the peas that was left have come up as though I had sown them broadcast, having remained in the ground all winter. I take the liberty of sending you a few peas in this letter, as I see in your April No. you request one of your subscribers to do so, and his statement that he could not. I think they will mature in your climate. I have no name for them, but my overseer calls them the prolific Cow Pea.

I see under the head of Clover for the South that there has been obtained at the Patent Office, Washington, the Chilian clover seed, which had been sown and found to stand the hot suns of the South. I am anxious to know if it is used in Maryland, and if the seed could be procured.—I am in the habit of looking to your good old State and the Farmer for improvements and everything useful in Agriculture, and wish it, (the Farmer) was more generally read in this sec-

tion. I have intended to get up a club to send on for the Farmer, but the bad crop of last year, and the present very unfavorable season has induced me to put it off for the present.
Monroe, La. 1850. J. H. STEVENS.

THE CROPS.—We learn from farmers, residing in different portions of this and adjoining counties, that the recent rains have materially improved the corn and cotton crops. Corn, in many parts, looks fine, while cotton, provided the fall is favorable, will yet do well.
Rome (Ga.) Southerner, 25th ult.

PLANT TREES.—Plant trees every where, we say; let them shade our streets, and grow wherever there is room for them. Especially plant them in the country, where open fields will admit, and be sure that in the end they will surprise the planter by their growth whilst he and his children are sleeping! In evidence of this, let us quote an anecdote to the purpose. It is related of a farmer in Long Island, that he planted an ordinary field of fourteen acres, with suckers from the locust (a native of this country) in the year of his marriage, as a portion for his children. His eldest son married at twenty-two.—On this occasion the farmer cut about \$1,500 worth of timber out of his locust wood, which he gave to his son to buy a settlement in Lancaster county. Three years after he did as much for his daughter. And thus he provided for his whole family; the wood in the mean time repairing by suckers all the losses it suffered.
Boston Transcript.

A USEFUL MACHINE.—A patent has been granted to Daniel D. Gitt of Butler Township, Adams Co., Pa., for a machine which it is believed will be of great service to farmers—it is a simple machine to dislodge and convey into the furrow, the rubbish which collects upon the coulter or cutter of the plough in the operation of ploughing; it is worked by a lever attached to the handle of the plough.

One jerk of the lever by the hand of the ploughman, while the plow is in progress, will dislodge all rubbish which may have accumulated, thus saving the necessity of having a boy to follow, or stopping frequently to clean the plough. This improvement it is expected will be exhibited in operation at our next State Fair.
[American Farmer.]

ISINGLASS and gin, dissolved together by slow heat, makes a good cement for glass.

CONTENTS OF THIS NUMBER.

Power of the Soil to Retain Manure.....	page 81
Neglected Manures—Bones.....	" 83
The Cotton Louse.....	" 84
Interesting to Cotton Growers.....	" 84
Essays on various subjects of Practical Agriculture—By Edmund Ruffin.....	" 85
What Cows should Farmers Keep.....	" 86
Method of distinguishing between Marl, Clay and other soils.....	" 87
Improving Grass Lands.....	" 87
The Essentials to Productive Farming..	" 88
Mowing Pastures.....	" 88
Cutting Grass and Curing Hay.....	" 88
Draining Meadows with the Sub-soil Plow.....	" 88
Louisiana—the Cow Pea—Chilian Clover,.....	" 95
Pruning Fodder.....	" 93
Plant Trees.....	" 96
The Crops.....	" 96
A Useful Machine.....	" 96

EDITORIAL.

The Cow Pea.....	" 89
Southern Central Agricultural Association.....	" 89

ORIGINAL COMMUNICATIONS.

Legislative Aid to Agriculture.....	" 90
Farming—Attention to small things the Secret of Success.....	" 91
Report of the Committee on Stock to the Pendleton Farmers' Society.....	" 91
Improving New Land.....	" 92

HORTICULTURAL DEPARTMENT.

Vegetable Calendar for August.....	" 93
------------------------------------	------

HOUSEWIVES' DEPARTMENT

The Education of Farmers' Daughters	" 94
A Word to the Ladies.....	" 94
Buckwheat Cakes.....	" 94
Frying Fish.....	" 94
Dairy Utensils.....	" 94

USEFUL RECEIPTS.

Blackberry Jam.....	" 95
Tomato Pickles.....	" 95
To Preserve Pears.....	" 95
Gumbo Soup.....	" 95
Green Corn Pudding.....	" 95
To Color and Preserve Brass Ornaments.....	" 95
Incombustible Whitewash.....	" 95
Indelible Ink.....	" 95
Anti-Friction Compound for Wagon Wheels.....	" 95
Britannia Ware.....	" 95
Earthen Ware.....	" 95
Cleaning Feather Beds.....	" 95
To keep Chimneys Clean.....	" 95
Scratches and Colic in Horses.....	" 95

ILLUSTRATIONS.

Pairing Plow.....	" 84
Smith's Corn Sheller.....	" 88
Bur-stone Mill.....	" 86

TO POSTMASTERS.

There are thousands to whom the subject needs only to be suggested, who would subscribe to a paper devoted to Southern Agriculture at the low price of one dollar a year. Your public position as well as other causes make you, persons, frequently conferred with upon the merits of newspapers and public journals. Situated as you are at central points in every part of the country, you have opportunities to exercise very great influence for the general good. The Post office department at Washington, looking to public convenience, has by its decisions encouraged your kind offices to the Press. We therefore, respectfully, solicit that you act as agents in your neighborhood to procure subscribers for the "Farmer and Planter." We would willingly allow commissions, for money collected from subscribers obtained in this way, if we had any idea they would be acceptable.
SEABORN & GILMAN.

GREAT SALE OF SHORT HORN CATTLE.



THE subscriber will offer for sale without reserve, at public auction, on



Tuesday, the 29th day of August next, at at 1 o'clock, P. M., on the farm of J. F. Sheafe, Esq., at New Hamburg, Dutchess Co., New York, about 35 head of Short-horn cattle, including cows, heifers, and calves.

This herd was mostly bred by Mr. Sheafe, and I do not hesitate to say I think it *one of the very best* in the United States; and I have seen and particularly examined nearly all of them. Great attention was paid in the commencement of this herd, to the milking properties of

the animals forming it; and this together with fine points and good growth and constitution, have been steadily kept in view in its breeding. There is but one cow in the herd which gives less than 20 quarts per day, in the best of the milking season while one has given over 29 quarts per day and made 15 lbs. 3 oz. of butter per week, and two others have given respectively, 31 and 36 quarts per day. Their color is of the most fashionable and desirable kind—red, red-and-white and a rich strawberry roan—only one white cow in the lot. They are of good size and fine style, and all in calf to the superb bull Exeter, who will also be offered for sale at the same time.

Pedigree of Exeter.—Exeter is of the Princess tribe of Shorthorns—was calved in June 1848, and bred by Mr. John Stevenson, of Wolviston, Durham England. He was got by Napier, (6.238,)—out of Jessamine, by Commodore (3.452)—Flora, by Belvidere, (1.706,)—Jessey, by Belvidere, (1.706,)—Cherry by Waterloo, (2.816) &c. See English Herd Book, Vol. V., for full pedigree.

Exeter was selected for Mr. Sheafe, by a first rate judge of Shorthorn stock and was considered one of the *very best bulls* in England. Quite a high price was paid for him; and it is believed that his superior, if even his equal, has never been imported into this country. He carries an enormous brisket for his age, and his style, handling, and quality are of the finest kind. His color is mostly a beautiful yellow-red, which is a bright red with a fine gold or saffron undertinge, arising from a rich yellow skin. He is the *only bull of this peculiarly desirable red*, ever imported into America. Calves got by him, out of this herd of cows, will fetch a high price the moment they are dropped.

Mr. Stephenson, the breeder of Exeter now stands at the head of his class in England, and his stock is of the highest repute. It is entirely of the Princess tribe, and traces its pedigrees without any alloy or Galloway blood, back to pure Shorthorns, for upwards of *two hundred years*; a matter of no small consideration to those who wish a *superior fresh cross*.

Catalogues of the above stock, with pedigrees in full, are now ready for distribution.

Southdown Sheep.—A choice flock of this superior breed of mutton sheep will be sold on the same day as above.

Suffolk Swine.—One boar and several breeding sows and pigs, of this fine breed of swine.

Working Oxen.—A handsome pair of red working oxen.
A. B. ALLEN,
 189, Water st., New York.

J. D. WRIGHT. J. WISTAR SIMPSON.
WRIGHT & SIMPSON,

ATTORNEYS AT LAW AND SOLICITORS IN EQUITY,
 WILL practise in Laurens, Newberry, Spartanburg, Abbeville, and Greenville.

Office in Simpson's Buildings, No 3, Laurens C. H., S. C..

The above firm is authorized to act as Agent for the FARMER & PLANTER, in Laurens district.